
**DRAFT BASIC ASSESSMENT REPORT: PROPOSED
KWAZULU-NATAL (KZN) AUTOMOTIVE SUPPLIER PARK
(ASP) INCORPORATING INDUSTRIAL DEVELOPMENT
ON THE REMAINDER OF THE FARM NOGI NO. 17469, AT
ILLOVO AND ASSOCIATED SEWER LINE AND ELECTRICAL
POWERLINE, WITHIN THE ETHEKWINI MUNICIPALITY,
KWAZULU-NATAL**

J38083

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Draft Basic Assessment Report

Durban Office

54 Norfolk Terrace
Norfolk House
1st Floor
Westville
3630

Tel: +27 31 267 8560
Fax: +27 31 266 3310

www.gibb.co.za



DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED KWAZULU-NATAL (KZN) AUTOMOTIVE SUPPLIER PARK (ASP) INCORPORATING INDUSTRIAL DEVELOPMENT ON THE REMAINDER OF THE FARM NOGI NO. 17469, AT ILLOVO AND ASSOCIATED SEWER LINE AND ELECTRICAL POWERLINE, WITHIN ETHEKWINI MUNICIPALITY, KWAZULU-NATAL

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List of Abbreviations

AOI	Area of Influence
ASP	Automotive Supplier Park
BA	Basic Assessment
BAR	Basic Assessment Report
CBA	Critical Biodiversity Area
CFA	Continuous Flight Auger
CFP	Chance Finds Procedure
CR	Critically Endangered
CVB	Channelled Valley Bottom
D'MOSS	Durban Metropolitan Open Space System
DAFF	Department of Agriculture, Forest and Fisheries
DEA	Department of Environmental Affairs
DO	Dissolved Oxygen
DTPC	Dube TradePort Corporation
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EC	Electric Conductivity
EDTEA	Department of Economic Development, Tourism and Environmental Affairs
EGL	Existing Ground Level
EI	Ecological Infrastructure
EIA	Environmental Impact Assessment
EKZNW	Ezemvelo KZN Wildlife
EN	Endangered
EPCPD	Environmental Planning and Climate Protection Department
ESA	Ecological Support Area
EWT	Endangered Wildlife Trust
FEPA's	Freshwater Ecosystem Priority Areas
FOV	Field of View

HEC-RAS	Hydrologic Engineering Center of the US Army Corps of Engineers-River Analysis Software
HGM	Hydrogeomorphic
IBA	Important Bird Area
IHAS	Intergrated Habitat Sysytem
IHI	Index of Habitat Intergrity
INR	Insitute of Natural Resources
IUCN	International Union for Conservation of Nature
KZN	KwaZulu-Natal
KZNBSP	KwaZulu-Natal Biodiversity Sector Plan
LC	Least Concern
LCC	Land CapabilityClass
NEMA	National Environmental Management Act (Act 107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act
NEMPAA	Nationa Environmental Management: Protected Areas Act, 2003
NFEPAs	National Freshwater Ecosystem Priority Areas
NHBRC	National Home Builders Registration Council
NT	Near Threatened
PA	Protected Area
PES	Present Ecological Status
POSA	Plants of Southern Africa
Pr	Protected
PU	Planning Unit
QDGC	Quarter Degree Grid Cell
SABAP	South African Bird Atlas Project
SANBI	South African National Biodiversity Institute
SVP	Sensitive Viewing Point
TDS	Total Dissolved Solids
TLB	Tractor Loading Brackhoe
UCVB	Unchannelled Valley Bottom
VP	View Point
VAC	Visual Absorption Capacity
VU	Vulnerable
WMA	Water Management Area

PURPOSE OF DOCUMENT	
A period of 30 calendar days (25 October 2019 to 25 November 2019) was provided to the State Departments and Interested and Affected Parties (I&APs) for the review and comment on the Basic Assessment Report (BAR). All I&APs, as well as State Departments were notified of this review period.	
PROJECT SUMMARY	
Project Name	Proposed KwaZulu-Natal (KZN) Automotive Supplier Park (ASP), incorporating industrial development on the Remainder of the Farm Nogi No. 17469, at Illovo and associated sewer line and electrical powerline, within the eThekweni Municipality, KwaZulu-Natal
Farm Name and Portions	Proposed KZN ASP Site Remainder of the Farm Nogi No. 17469
	Proposed sewer rising main Remainder of the Farm Nogi No. 17469 Portion 8 of the Farm Illovo No. 16946 Portion 4 of the Farm Illovo No. 16946 Remainder of the Farm Lower Illovo No. 17126 Remainder of the Farm Illovo No. 16946 Portion 105 of the Farm Lower Illovo No. 17126 Remainder of the Farm Illovo No. 16409
	Option 1 (Preferred) Powerline Route Remainder of the Farm Togo No. 9374 Remainder of the Farm Illovo No. 16946 Remainder of the Farm Lot 23 No. 3253 Remainder of the Farm Nogi No. 17469
	Option 1 (Preferred) Road Access Portion 1 of Erf 187, Kingsburgh Portion 6 of Erf 145, Kingsburgh Portion 1 of the Farm Nogi No. 9376 Portion 5 of Erf 141, Kingsburgh Portion 1 of Erf 140, Kingsburgh Remainder of Erf 140, Kingsburgh Portion 1 of Erf 137, Kingsburgh Portion 1 of Erf 188, Kingsburgh
Surveyor-General 21 Digit Codes	Proposed KZN ASP Site NOET00000001746900000
	Proposed sewer rising main NOET00000001694600008 NOET00000001694600004 NOET00000001712600000 NOET00000001694600000 NOET01630000096200001 NOET00000001640900000

	<p>Option 1 (Preferred) Powerline Route</p> <p>NOET00000000937400000 NOET00000001694600000 NOET00000000325300000 NOET00000001746900000</p>
	<p>Option 1 (Preferred) Road Access</p> <p>NOET01630000018700001 NOET01630000014500006 NOET00000000937600001 NOET01630000014100005 NOET01630000014000001 NOET01630000014000000 NOET01630000013700001 NOET01630000018800001</p>
<p>Brief Project Overview</p>	<p>The proposed development entails a large scale industrial park (~265ha) comprising of four large platforms (for warehousing) ranging in size from approximately 37ha to 56ha that will be levelled by cut and fill construction methods. The site will include a municipal services node comprising a potable water reservoir and an electrical substation. Various land uses such as general industry, industrial and commercial park and administration are proposed for establishment as part of the proposed project. The remainder of the site will be set aside for open space/conservation uses in order to maintain ecological corridors through the site.</p> <p>To provide access to these various land use areas, the establishment of a central boulevard with a road reserve of approximately 50m in width and 1,76km in length, running across the site from the new N2 interchange, and linking with the P197, is proposed. This proposed central boulevard will serve as a public access road. A number of private roads that will be access-controlled, will link off this central boulevard, to the various industrial land use areas. Regardless of the access option to site, the central boulevard will extend between the P197 and N2.</p> <p>The project will further include the construction of service infrastructure such as:</p> <ul style="list-style-type: none"> • connecting to an existing municipal bulk water supply line, running adjacent to the P197, together with the construction of a new reservoir on site for the storage of potable water; • constructing a 132kV electrical substation, which will link to the existing Kingsburgh Substation, via a new 132kV overhead powerline; and • as there is no municipal sewer main located close to the site, a sewer pump station is proposed on the southern portion of the site. A sewer rising main adjacent to the road reserve of P197, R603 and within the municipal road reserve to the existing Kingsburgh Waste Water Treatment Works (WWTW) is proposed.

Development footprint	KZN ASP (incorporating industrial development): 264.8ha Proposed sewer rising main: 8.7km Proposed powerline route: 3.62km x 35m corridor
Site Photographs	Attached in Appendix C .
ADDITIONAL AUTHORISATIONS REQUIRED	
Water Use Licence Application (WULA)	<p>A number of wetlands and watercourses have been delineated within the 500m regulated area of the proposed KZN ASP, sewer rising main and 132kV transmission powerline route. As , such, in terms of the National Water Act, 1998 (Act No. 36 of 1998) the following water use activities are triggered:</p> <ul style="list-style-type: none"> • Section 21 (c) impeding or diverting the flow of water in a watercourse; and • Section 21 (i) altering the bed, banks, course or characteristics of a watercourse. <p>A WULA has therefore been lodged with the Department of Water and Sanitation (DWS), simultaneously with the Application for Environmental for Environmental Authorisation.</p>
CONFIRMATION OF CAPACITY REQUIREMENTS	
Infrastructure Services	All services required by the Project (viz. electricity, water, sewage etc.) will be provided by the eThekweni Municipality.
Solid Waste (Construction and Operation)	<p>Construction Phase: The Contractor will be responsible for the management and removal of all solid waste (refer to the Environmental Management Programme (EMPr) in Appendix F).</p> <p>Operational Phase: An inclusive and comprehensive Waste Management Plan must be developed incorporating all of the individually required plans from prospective tenants.</p> <p>All waste (glass, plastic, paper) generated on site will be recycled as far as possible. General waste, not recycled, will be collected on a weekly basis for removal by an appointed registered waste removal company or the Local Municipality.</p>

Legal requirements for Basic Assessment Report content as detailed in NEMA GNR 326

Legal requirements as per the NEMA GNR 928	Relevant Report Section
Details of the EAP who prepared the report.	Section 1.3 of Chapter 1 and Appendix I (CVs).
Details of the expertise of the EAP, including curriculum vitae	Section 1.3 of Chapter 1 and Appendix I (CVs).
The location of the activity, including:	Section 2.1.2 in Chapter 2.
(i) the 21 digit Surveyor General code of each cadastral land parcel;	Section 2.1.2 in Chapter 2.

Legal requirements as per the NEMA GNR 928	Relevant Report Section
(ii) where available, the physical address and farm name; and	Section 2.1.2 in Chapter 2.
(iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Section 2.1.2 in Chapter 2.
A plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is (i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or	Figure 2-4 and Figure 2-5, Figure 2-8 to 2-12 in Chapter 2.
(iv) on land where the property has not been defined, the coordinates within which the activity is to be undertaken.	Figure 2-2 and Section 2.1.2 of Chapter 2
A description of the scope of the proposed activity, including- (i) All listed and specified activities triggered and being applied for; and	Table 2-25 in Section 2.11.1 of Chapter 2.
(ii) A description of the associated structures and infrastructure related to the development;	Section 2.1.2, Section 2.6 of Chapter 2
A description of the policy and legislative context within which the development is located and an explanation of how the proposed development complies with and responds to the legislation and policy context;	Chapter 2.11.3 – Legal Requirements
A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	Section 2.10.1 of Chapter 2
A motivation for the preferred site, activity and technology alternative;	Section 2.10 of Chapter 2.
A full description of the process followed to reach the preferred alternative within the site, including:	
(i) Details of all the alternatives considered;	Chapter 2.10 of Chapter 2
(ii) Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;	Section 4.4 of Chapter 4
(iii) A summary of the issues raised by Interested and Affected Parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;	Section 4.4.2 of Chapter 4. Refer to the Comments and Responses Report in Appendix E based upon comments received during the distribution of the Background Information Document (BID). A summary of the issues raised by the I&APs during public review of the Draft BAR will be provided in the Final BAR.
(iv) The environmental attributes associated with the development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	Chapter 3 – Receiving Environment

Legal requirements as per the NEMA GNR 928	Relevant Report Section
(v) The impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts— (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated;	Chapter 5 – Impact Assessment
(vi) The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;	Chapter 5 – Impact Assessment
(vii) Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	Chapter 5 – Impact Assessment
(viii) The possible mitigation measures that could be applied and level of residual risk;	Chapter 5 – Impact Assessment All mitigation measures provided by the specialists have also been included in the EMPr (Appendix F).
(ix) The outcome of the selection matrix;	Alternatives have been discussed in Chapter 2. Alternatives that were unfeasible have not been further assessed. Relevant reasons have been provided in this Chapter. Refer to Section 6.2 of Chapter 6.
(x) If no alternatives, including alternatives locations for the activity were investigated, the motivation for not considering such; and	Refer to Section 2.10.1.
(xi) A concluding statement indicating the preferred alternatives, including preferred location of the activity.	Refer to Section 2.10 of Chapter 2 and Section 6.2 of Chapter 6.
A full description of the process undertaken to identify, assess and rank the impacts the activity and associated structures and infrastructure will impose on the preferred location through the life of the activity, including—	
(i) A description of all environmental issues and risks that were identified during the environmental impact assessment process; and	Chapter 5 and 6
(ii) An assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;	Chapter 5 – Impact Assessment
An assessment of each identified potentially significant impact and risk, including—	

Legal requirements as per the NEMA GNR 928	Relevant Report Section
<ul style="list-style-type: none"> (i) cumulative impacts; (ii) the nature, significance and consequences of the impact and risk; (iii) the extent and duration of the impact and risk; (iv) the probability of the impact and risk occurring; (v) the degree to which the impact and risk can be reversed; (vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and (vii) the degree to which the impact and risk can be mitigated; 	Chapter 5 – Impact Assessment
Where applicable, a summary of the findings and recommendations of any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final assessment report;	All specialist studies are included in Appendix D. Specialist Studies provided their findings of the receiving environment which have been included in Chapter 3 – Description of the Receiving Environment. Chapter 5 – Impact Assessment includes all the impacts and findings as identified by the specialists. Findings of the specialist studies have also been used to determine the consequences of the residual risk (see Chapter 6).
An environmental impact statement which contains—	
<ul style="list-style-type: none"> (i) a summary of the key findings of the environmental impact assessment; (ii) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred development footprint indicating any areas that should be avoided, including buffers; and (iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives; 	<p>Chapter 5.8 – Impact Assessment</p> <p>Refer to Chapter 5 – receiving environment which includes some sensitivity maps.</p> <p>Chapter 5.8 – Impact Assessment</p>
Based on the assessment, and where applicable, recommendations from specialist reports, the recording of proposed impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation;	Refer to Section 6.2 and 6.2.1 of Chapter 6 – Conclusion and Appendix F for the EMPr.
Any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;	Refer to Section 6.2.1 of Chapter 6.

Legal requirements as per the NEMA GNR 928	Relevant Report Section
A description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed;	Refer to Assumptions and Limitations section in Chapter 6.
A reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;	Refer to Chapter 6.2.1 of Chapter 6.
Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required and the date on which the activity will be concluded and the post construction monitoring requirements finalized;	Refer to Section 2.1.1 of Chapter 2.
An undertaking under oath or affirmation by the EAP in relation to- <ul style="list-style-type: none"> (i) The correctness of the information provided in the report; (ii) The inclusion of comments and inputs from stakeholders and Interested and Affected Parties; (iii) The inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) Any information provided by the EAP to Interested and Affected Parties and any responses by the EAP to comments or inputs made by interested or affected parties. 	See attached declaration under oath in Appendix I .
Where applicable, details of any financial provision for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;	n/a
Any specific information that may be required by the competent authority; and	As provided above and as included in Chapter 6.2.1.
Any other matters required in terms of section 24(4)(a) and (b) of the Act.	Noted.
Where a government notice gazette by the Minister provides for any protocol or minimum information requirement to be applied to an environmental impact assessment report the requirements as indicated in such notice will apply.	Noted.

Executive Summary

Introduction

GIBB has been appointed by the Dube TradePort Corporation (DTPC) to carry out the town planning rezoning application, in terms of the Spatial Planning and Land Use Management Act, 2013 (SPLUMA), to allow the establishment of an industrial township for the proposed KwaZulu-Natal Automotive Supplier Park (KZN ASP). This appointment includes undertaking an Application for Environmental Authorisation (EA), subject to a Basic Assessment (BA) process, a Water Use License Application (WULA) and the associated specialist studies.

The above legislative processes are applicable to the proposed construction of the KZN ASP, the proposed sewer line connection from the development site to the existing Kingsburgh Wastewater Treatment Works (WWTW) and the proposed 132kV electrical powerline from the existing Kingsburgh substation to a proposed 132kV substation on the site for the KZN ASP.

The Department of Environmental Affairs (DEA) is the Competent Authority for the project. The proposed project triggers 'listed activities' as defined by Government Notice GNR 983 and 985, and as such, an Environmental Authorisation by way of a BA process, in terms of the National Environmental Management Act, 1998 (No.107 of 1998) [NEMA], will be required before activities can commence. The Draft Basic Assessment Report (DBAR) has been compiled in accordance with the requirements set out in the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) and with input from various specialist studies.

The DBAR is available for public review and comment for a period of 30 days from 25 October to 25 November 2019. Following the commenting period, the Final BAR will be updated (with the comments received and responses provided to Interested and Affected Parties (I&APs) upon public review of the DBAR) and submitted to the DEA for consideration towards an Environmental Authorisation.

Project Description

The project involves the proposed construction of an Automotive Supplier Park (ASP) in Illovo, KwaZulu-Natal and associated infrastructure and services. South Africa currently has three dedicated ASPs in the country which were conceptualised and implemented by the Automotive Industry Development Centre (AIDC) and other relevant international and local stakeholders. Two occur in the Eastern Cape and one in Gauteng. The aim of the ASPs is to accommodate component suppliers and service multiple Original Equipment Manufacturers (OEMs) from a centralised location. The primary objective of establishing these ASPs was thus to stimulate investment in major specialised infrastructure and integrated logistics services to the automotive industry in close proximity to OEMs, with the ultimate aim of increasing local content, reducing manufacturing costs and increasing competitiveness amongst OEM suppliers.

Although the majority of the automotive industry is located in the Eastern Cape, the automotive manufacturing activity in KwaZulu-Natal (KZN) accounts for over 25% of South Africa's automotive manufacturing activity. The automotive sector is furthermore one of the four major lead sectors identified in the Industrial Policy Action Plan IV (IPAP) which underscores the framework for the

implementation of the National Industrial Policy Framework (NIPF) in addition to the New Growth Path.

Toyota SA is currently at the forefront of automotive manufacturing in South Africa and has significantly contributed to the KZN economy. In light of this, the main objective of the KZN Automotive Supplier Park (ASP) is to support Toyota SA Motors, who is the only Original Equipment Manufacturers (OEM) based in KZN, and to further attract other OEMs. This would unlock investment opportunities, provide sustainable jobs and advance the OEMs growth trajectory in KZN. A preferred site was identified at Illovo South and this site formed the base of the initial pre-feasibility study for an ASP in KZN. In November 2015, the KZN MEC for Economic Development, Tourism and Environmental Affairs (EDTEA) requested that the Dube TradePort Corporation (DTPC) take responsibility for acquiring the preferred development site from Illovo Sugar SA (Pty) Ltd. The DTPC completed this acquisition process and it is envisaged that the DTPC will apply for the ASP site to be designated as part of the DTP Special Economic Zone (SEZ).

The proposed development entails a large scale industrial park (~265ha) comprised of four large platforms (for warehousing) ranging in size from approximately 37ha to 56ha that will be levelled by cut and fill construction methods. The site will include a municipal services node comprising a potable water reservoir and an electrical substation. Various land uses such as general industry, industrial, business and municipal (proposed reservoir and electrical substation) are proposed for establishment as part of the proposed project. The remainder of the site will be set aside for open space/conservation uses in order to maintain ecological corridors through the site.

Access to the site will either be obtained from maintenance of the status quo of existing roads in the area (without any road upgrades) or on a proposed interchange on the N2. To provide access to the various land use areas within the development, the establishment of a central boulevard with a road reserve of approximately 50m in width and 1,76km in length, running across the site from the new N2 interchange, and linking with the P197, is proposed. This proposed central boulevard will serve as a public access road. A number of private roads that will be access-controlled, will link off this central boulevard, to the various industrial land use areas.

The project will further include the construction of service infrastructure such as:

- connecting to an existing municipal bulk water supply line, running adjacent to the P197, together with the construction of a new reservoir on site for the storage of potable water;
- constructing a 132kV electrical substation, which will link to the existing Kingsburgh Substation, via a new 132kV overhead powerline; and
- as there is no municipal sewer main located close to the site, a sewer pump station is proposed on the southern portion of the site as well as a sewer rising main adjacent to the road reserves of the P197 and R603, and within municipal roads to the existing Kingsburgh Waste Water Treatment Works (WWTW).

Construction of the full development is expected over a duration of 13 years. Construction is will take place in phases and Phase 1A is anticipated to commence in August 2021. Operation of Phase 1A is expected to commence in 2023. Phase 1B in 2025. Phase 1C in 2028. Phase 1D in 2033.

Alternatives

The most *relevant* alternatives are shown below (refer to Chapter 2 for further details).

Proposed KZN ASP Site Location

The property is located south of Durban and adjacent to the N2, between Winkelspruit and Umgababa, in KZN Province. The property (also referred to as the Township Establishment Area (TEA)) earmarked for the proposed development of the KZN ASP is described as the remainder of the Farm Nogi No. 17469, in Illovo, within the jurisdiction of the eThekweni Municipality, in KwaZulu-Natal. The size of the property is approximately 400ha.

Proposed Sewer Rising Main Alignment

Two sewer rising main route alignments were originally investigated i.e. Option 1 and Option 2. Option 2 was deemed not a feasible and reasonable alternative. Option 1 is therefore the preferred alternative. Option 1 is proposed to be routed along the western boundary of the KZN ASP site adjacent to the road reserves of the P197 and R603, along the municipal road (Santo Alberto Road) and Longacres Drive to the existing Kingsburgh Wastewater Treatment Works (WWTW). The proposed new sewer pipeline route is approximately 8.75km in length and will form part of the ASP sewage reticulation system

Proposed 132kV Powerline Alignment

There are three alternative powerline route alignments that were considered for the proposed development. Alternative route Option 1 was selected in consultation with eThekweni Electricity and is the preferred alternative. The preferred Option 1 is the shortest of the proposed powerline alternatives at approximately 3.62 km in length and extends from the existing Kingsburgh Substation to the proposed substation on the ASP site. The route runs in a south-westerly and then southerly direction with pylons situated on the highest lying areas in each position. The route crosses the Illovo River and heads south between the P197 and the Mother of Peace Children's Home, until climbing the hill towards the proposed site for the substation within the ASP site. The majority of the existing land use through which the powerline traverses is sugar cane land.

Proposed Access to the Site

There are five options for access to the site as summarised below. Option 1 is the preferred alternative for the development. Access to the site also includes the P197 on the west side of the proposed development for all options.

Alternative	Description
Option 0	No road upgrades – status quo of the road network remains
Option 1 (Preferred)	New full narrow diamond interchange on the N2
Option 1c	New full narrow diamond interchange on the N2, with the R102 link bridge
Option 1d	New R102 link bridge with no new interchange on N2
Option 3b	New loop off-ramp for south-bound traffic, and new half narrow diamond N2 interchange for north-bound traffic and exit on N2 for north-bound traffic only

Proposed ASP Site Layout

There are two Site Layout Alternatives which are directly related to the road access options. Option 1 Site Layout Plan will be the preferred layout, should Option 1, 1c or 1d be the access option. Option 3 Site Layout Option will be the preferred layout should access from road access Option 3b be preferred. There is no difference between the two layouts in terms of areas of impact on the wetlands.

Based the above description of the alternatives, and in line with the legal requirements the EAP is required to provide:

- a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;
- the final proposed alternatives which respond to the impact management measures, avoidance, and mitigation measures identified through the assessment;

These alternatives were therefore carried through and assessed further in the Impact Assessment (Chapter 5).

No-Go Alternative

The “No-Go” alternative refers to the alternative of not embarking on the proposed project. This alternative would imply that the current biophysical and socio-economic environment will prevail. Should the project not go ahead, there would be no negative impacts in terms of noise, visual, ecological, wetlands, air quality, traffic and other socio-economic impacts.

Without the proposed establishment of the industrial township for the proposed ASP and associated land uses, the status quo as it currently exists, would remain. Thus, in the absence of the proposed development, there would be no provision to realise the goals of the South African Automotive Masterplan (SAAM) to 2035. Firstly, should the no-go alternative be implemented, there will be no initiative for the South African automotive industry to be globally competitive (relative to leading international automotive producers). The second component relates to the industry’s contribution to the transformation of the South African economy. This encompasses multiple elements, from employment equity to the greater inclusion of Black-owned firms within the automotive value chain. The no-go alternative will not lead to an impetus for this to be realised. The third component relates to the sustainable development of the South African economy. The critical elements encompassed within this component relate to the growth of the industry, employment provided, skills developed, and the improved environmental impact of products and production processes. The final component relates to the shared prosperity created by the industry, with the critical elements here comprising the financial health and wellbeing of firms within the value chain, fair employee remuneration, and the broader contribution of the value chain to the South African fiscus. In light of the vision of SAAM, the no-go option is therefore not feasible at this stage.

The Automotive industry plays a significant role in social and economic development and therefore the Government has recognised that vehicle production and component manufacturing are important in creating new sustainable employment opportunities across the automotive value chain and enhancing the trade balance of SA. Should the proposed development not be approved, these objectives would not be attained.

Impact Statement

The following impacts were identified and assessed during the Impact Assessment phase of this project (refer to Chapters 5 and 6 for further details). Outlined below is a summary of the significance of the impacts after before and after mitigation for each of the preferred alternatives.

Sewer Rising Main Option 1 (Preferred)		
<i>Impact</i>	<i>Significance before mitigation</i>	<i>Significance after mitigation</i>
Construction Phase		
Disturbance to, or destruction of indigenous vegetation including Protect species	Moderate negative	low - negative
Establishment and spread of alien invasive vegetation	Moderate negative	very low negative
Altered hydrological processes, erosion and/sediment regime of wetlands and watercourses	Moderate negative	very low negative
Reduced water quality of wetlands and watercourses	Moderate negative	very low negative
Altered ecological processes and biodiversity of wetland areas	Low negative	very low negative
Pollution of vadose zone and regional water table/groundwater aquifer during excavations	very low negative	very low negative
Changes to stream characteristics (aquatic ecosystem)	Low negative	very low negative
Increase in sedimentation and turbidity of stream channels (aquatic ecosystem)	very low negative	very low - negative
Degradation of water quality of non-perennial and perennial river systems (aquatic ecosystem)	very low negative	very low negative
Increased potential for soil erosion caused by vegetation clearance	Moderate negative	very low - negative
Impact on heritage and archaeological resources	very low negative	very low negative
Increased noise generation due to construction activities and the movement of construction vehicles	very low negative	very low negative
Increase in ambient dust levels and air emissions, as a result of construction activities	Low negative	very low negative
Change of visual character of the site, due to construction activities	Low negative	very low negative
Increased traffic congestion on surrounding road network, as a result of construction activities	Low negative	very low negative
Skills transfer and capacitating of the local communities	Very low positive	Moderate positive
Operational Phase		
Impacts on aquatic taxa sensitive to change in water quality	very low negative	very low negative
Impacts of sewerage spills or contamination on the iLovu Estuary	Moderate negative	very low - negative
Reduced water quality of wetlands due to accidental spillage of sewerage	High negative	low negative
Altered ecological processes and biodiversity of wetlands, as a result of invasion by alien plants during maintenance	low negative	very low negative
Pollution of vadose zone and regional water table/groundwater aquifer during accidental spillage of sewage	very low negative	very low negative

Sewer Rising Main Option 1 (Preferred)		
Impact	Significance before mitigation	Significance after mitigation
Degradation of water quality of non-perennial and perennial river systems (aquatic ecosystem)	very low negative	very low negative
Decommissioning		
Same as for construction		

132kV Powerline Option 1 (Preferred)		
Impact	Significance before mitigation	Significance after mitigation
Construction Phase		
Disturbance to, or destruction of indigenous vegetation including Protect species	very low negative	very low negative
Establishment and spread of alien invasive vegetation	Moderate negative	very low negative
Changes to stream characteristics (aquatic ecosystem)	Low negative	very low negative
Increase in sedimentation and turbidity of stream channels (aquatic ecosystem)	very low negative	very low - negative
Pollution of vadose zone and regional water table/groundwater aquifer during excavations	very low negative	very low negative
Degradation of water quality of non-perennial and perennial river systems (aquatic ecosystem)	very low negative	very low negative
Increased potential for soil erosion caused by vegetation clearance	Moderate negative	very low - negative
Altered hydrological processes, erosion and/sediment regime of wetlands and watercourses	Low negative	very low negative
Reduced water quality of wetlands and watercourses	very low negative	very low negative
Altered ecological processes and biodiversity of wetland habitat as a result of increased spread of invasive alien plants	very low negative	very low negative
Impact on heritage and archaeological resources	very low negative	very low negative
Impact on sensitive visual receptors in the vicinity of the proposed powerline route	High negative	very low negative
Increase in ambient noise levels on surrounding land owners	Low negative	very low negative
Increase in ambient dust levels and air emissions, as a result of construction activities	Low negative	very low negative
Increased traffic congestion on surrounding road network, as a result of construction activities	Low negative	very low negative
Skills transfer and capacitating of the local communities	Very low positive	Moderate positive
Operational Phase		
Increased potential for electrocution of birds as a result of the presence of powerlines	Moderate negative	very low negative
Increased potential for collision of birds, as a result of the presence of powerlines	High negative	very low negative
Altered hydrological processes, erosion and/or sediment regime of the nearby wetlands, as a result of maintenance activities	very low negative	very low negative

132kV Powerline Option 1 (Preferred)		
Impact	Significance before mitigation	Significance after mitigation
Altered ecological processes and biodiversity of wetlands, as a result of invasion by alien plants during maintenance	very low negative	very low negative
Decommissioning		
Same as for construction		

Site Access Option 1 (Preferred)		
Impact	Significance before mitigation	Significance after mitigation
Construction Phase		
Increased traffic congestion on surrounding road network, as a result of construction activities	Low negative	very low negative
Nuisance and inconvenience to the local community as a result of road upgrade activities during construction	Low negative	very low negative
Employment opportunities as a result of construction of the road access	Low positive	Moderate positive
Decline in property values as a result of construction of the road access	very low negative	very low negative
Impact on heritage and archaeological resources	Low negative	very low negative
Destruction of indigenous vegetation and faunal habitat	high negative	Moderate negative
Destruction of plant species of conservation concern and protected plant species	high negative	Low negative
Establishment and spread of alien invasive vegetation	high negative	Low negative
Erosion and siltation of drainage lines, wetlands and downstream estuaries	Very high negative	Low negative
Pollution of drainage lines, wetlands, and downstream estuaries	Very high negative	Low negative
Loss of ecosystem services and ecological corridors	high negative	Moderate negative
Permanent loss of wetland habitat	Moderate negative	Low negative
Altered hydrology, erosion and/sediment regime of wetlands as a result of vegetation clearance	Moderate negative	low negative
Reduced water quality of wetlands and watercourses	Moderate negative	low negative
Altered ecological processes and biodiversity of wetland habitat, as a result of alien invasive plant establishment	Moderate negative	low negative
Operational Phase		
Increased pressure on local roads	very low negative	very low negative
Decline in property values	moderate negative	low negative
Economic opportunities	Low positive	moderate positive
Potential health (air quality) impacts	low negative	low negative
Impact on sensitive noise receptors as a result of traffic flows	moderate negative	moderate negative
Impact on sensitive visual receptors as a result of construction of the narrow diamond interchange	low negative	low negative

Site Access Option 1 (Preferred)		
Impact	Significance before mitigation	Significance after mitigation
Ecosystem enhancement and decrease in alien plant infestations	high negative	Moderate positive
Increased protection of Critical Biodiversity Areas	high negative	Moderate positive
Altered hydrology, erosion and/or sediment regime	moderate negative	low negative
Reduced water quality of wetlands	moderate negative	low negative
Altered ecological processes and biodiversity of wetland habitat, as a result of alien invasive plant establishment	moderate negative	low negative
Decommissioning		
<i>Same as for construction</i>		

KZN ASP Site Layout Plan Alternative 1 (Preferred)		
Impact	Significance before mitigation	Significance after mitigation
Construction Phase		
Impacts of water quantity changes on the iLovu Estuary during the construction phase of the ASP	Moderate negative	very low negative
Impacts of water quantity changes on the uMsimbazi Estuary during the construction phase of the ASP	High negative	very low negative
Impacts of water quality changes on the iLovu Estuary	low negative	very low negative
Impacts of water quality changes on the uMsimbazi Estuary	Very high negative	very low negative
Impacts of disturbance by higher levels of noise and light on the iLovu and uMsimbazi Estuary during the construction phase of the ASP	High negative	Moderate negative
Impacts to ecological linkages/corridors between the iLovu and uMsimbazi Estuaries and adjacent or nearby ESAs	Low negative	moderate positive
Permanent loss of wetland habitat	High negative	Moderate negative
Altered hydrology, erosion and/sediment regime of wetlands as a result of vegetation clearance	Moderate negative	low negative
Potential for contamination of wetlands and watercourses (especially uMsimbazi Estuary downstream of the site), as a result of accidental spillage of hydrocarbons	Moderate negative	low negative
Altered ecological processes and biodiversity of wetland habitat, as a result of alien invasive plant establishment	Moderate negative	low negative
Destruction of indigenous vegetation and faunal habitat, as a result of construction outside of designated areas for the development	Moderate negative	very low negative
Destruction of plant species of conservation concern and protected plant species as a result of construction of platforms, roads and infrastructure	High negative	low negative
Disturbance to and displacement of fauna due to noise and light pollution	Moderate negative	low negative
Establishment and spread of alien invasive vegetation	High negative	Low negative
Erosion and siltation of drainage lines, wetlands and downstream estuaries	Very high negative	Low negative

KZN ASP Site Layout Plan Alternative 1 (Preferred)		
Impact	Significance before mitigation	Significance after mitigation
Pollution of drainage lines, wetlands, and downstream estuaries as a result of construction waste spills	Very high negative	Low negative
Loss of ecosystem services and ecological corridors	High negative	very low negative
Change of streamflow characteristics of the aquatic environment, as a result of construction activities and hardened surfaces	low negative	very low negative
Degradation of water quality of non-perennial streams situated downstream of the development site and impact on the aquatic resources	Moderate negative	very low negative
Pollution of the vadose zone and regional water table / groundwater aquifer as a result of construction activities	very low negative	very low negative
Impact of groundwater dewatering/ reduced streamflow of nearby stream	very low negative	very low negative
Increase in ambient dust levels and air emissions, due to construction activities	Low negative	very low negative
Change of visual character as a result of construction activities	moderate negative	very low negative
Impact on heritage and archaeological resources	Low negative	very low negative
Impact on the community as a result of increased noise generation due to construction activities and the movement of construction vehicles	moderate negative	Low negative
Impact of increased traffic congestion on public roads surrounding the site	Low negative	very low negative
Increased informal dwellers as a result of construction activities at the site for development	Low negative	very low negative
Increased criminal activity, as a result of construction activities at the site for development	Low negative	very low negative
Foreign direct investment as a result of the proposed KZN ASP development	Moderate positive	Moderate positive
Impact of urban renewal	Moderate positive	Moderate positive
Employment opportunities as a result of construction	Moderate positive	Moderate positive
Operational Phase		
Impacts of water quantity changes on the iLovu and uMsimbazi Estuary during the operational phase of the ASP	Very high negative	very low negative
Impacts of water quality changes of the iLovu Estuary during the operational phase of the ASP	Very high negative	very low negative
Impacts of water quality changes of the uMsimbazi Estuary during the operational phase of the ASP	Very high negative	very low negative
Impacts of disturbance by higher levels of noise and light on the iLovu and uMsimbazi Estuaries during the operational phase of the ASP	High negative	moderate negative
Impacts to ecological linkages/corridors between the iLovu and uMsimbazi Estuaries and adjacent or nearby ESAs	low negative	moderate positive
Potential for the decline in the aesthetic value of the iLovu and uMsimbazi Estuaries	moderate negative	moderate negative
Altered hydrology, erosion and / sediment regime of wetlands, as a result of hardened surfaces	moderate negative	moderate negative
Reduced water quality of wetlands and watercourses as a result of spillage of contaminants	moderate negative	moderate negative

KZN ASP Site Layout Plan Alternative 1 (Preferred)		
Impact	Significance before mitigation	Significance after mitigation
Pollution of drainage lines, wetlands, and downstream estuaries as a result of potential spills and waste material	Very high negative	low negative
Disturbance to and displacement of fauna	moderate negative	low negative
Spread of invasive alien plant species in natural areas and wetlands on site	High negative	low negative
Ecosystem enhancement and decrease in alien plant infestations, as a result of rehabilitation	Very high negative	moderate positive
Increased protection of Critical Biodiversity Areas as a result of rehabilitation and restoration of Critical Biodiversity Areas (CBA's)	High negative	moderate positive
Pollution of the vadose zone and regional water table / groundwater aquifer as a result of operational activities	very low negative	very low negative
Degradation of aquatic and riparian habitats as a result of poor solid waste management at the KZN ASP development	very low negative	very low negative
Increased noise on sensitive receptors, as a result of the proposed operational activities within the industrial development site	very low negative	very low negative
Impact of permanent change of visual character on the nearby visual receptors	moderate negative	very low negative
Impact of loss of agricultural land as a result of the proposed development	high positive	high positive
Increased pressure on local road infrastructure	High negative	low negative
Increased pressure on municipal services and existing community facilities	High negative	low negative
Impact of expanded manufacturing base	moderate positive	moderate positive
Increased contribution to municipal rates as a result of the change of land use activities on the site	high positive	high positive
Decommissioning		
<i>Same as for construction</i>		

Conclusion

In accordance with EIA Regulations, 2014 (as amended), the Basic Assessment process for the proposed KZN ASP Project has identified and assessed the potential impacts caused by the proposed development and all its components. The ability to mitigate identified impacts are also addressed and summarised into a working / dynamic Environmental Management Programme (EMPr).

The Draft BAR was made available for public review for a period of 30 days (from Friday 25 October to Monday 25 November 2019) during which time all registered I&APs were given adequate opportunity to review the Draft BAR and provide their comments on the content thereof. All correspondence received during the public review period, comments and/or concerns identified by I&APs during the public review period of the Draft BAR will be incorporated into the Final BAR following the public commenting period.

All key issues associated with the alternatives for this project, as identified during the Basic Assessment, have been investigated by the specialist team and categorised in terms of their

biophysical and socio-economic parameters. Following the assessment of the implications of the impacts for decision-making, the consequences and residual risk and benefits associated with the development of the proposed KZN ASP and associated sewer pipeline and 132kV powerline were summarised as follows:

- The likelihood of Nuisances occurring was determined to be Likely to Highly Likely resulting in a Low to Moderate residual risk. Such nuisances can be mitigated and are included in the EMPr.
- The likelihood of the Loss of Heritage Resources was considered to be Unlikely but Possible, resulting in a Moderate residual risk. Although the possibility of encountering previously unidentified heritage resources such as burial sites is low, should such sites be exposed during subsurface construction work, the chance finds process must be implemented where necessary. From a heritage and archaeological perspective, the proposed ASP site and access points are feasible.
- The likelihood of Reduction in Livelihoods occurring was determined to be Likely resulting in a Moderate residual risk. A concerted effort must be made to make preferential use of local labour for low / unskilled positions. Furthermore, the local authorities must be vigilant of the potential for informal settlements and an increase in criminal activities to take place and plan accordingly.
- The likelihood of Material Reductions in Biophysical Environmental Attributes was determined to be Unlikely but Possible for the sewer line and powerline options resulting in a Low to Moderate residual risk. All impacts can be mitigated and are included in the EMPr. The powerline Option 1 is the most feasible alternative and can be authorised with the condition that the entire route is fitted with anti-collision devices such as bird flight diverters / flappers.
- The likelihood of Material Reductions in Biophysical Environmental Attributes for the ASP and site access options was determined to be Highly Likely to Unlikely but Possible resulting in a High to Moderate residual risk. This implies that if the project is authorised, strict conditions and high levels of compliance and enforcement must be applied.
- Based on all of the improvements above, the likelihood of Improved Environmental Quality occurring was determined to be Definite resulting in a Moderate residual benefit.
- Overall there would be positive benefits to the surrounding local communities and Municipality resulting in a High residual benefit.
- According to the detailed impact assessment road access Option 1 is the preferred alternative, although Option 3b is also feasible. It is the EAP's recommendation that Option 1 maybe authorised with strict conditions (see Section 6.2.1) and high levels of compliance and enforcement.
- The authorisation of the development must include the conditions specified in Chapter 6, Section 6.2.1, as per the specialist studies in Appendix D.

Assumptions and limitations

The following assumptions and limitations apply to this report:

- This report was informed by the information provided by the Applicant, project engineers, town planners, engagement with the state departments, and findings of various specialist studies and site investigations undertaken at the time of compilation of this report;
- The specialist studies conducted meet the minimum requirements, and as such, no additional studies were undertaken;
- All spatial data available to the EAP was utilised in the assessment of the proposed development. It was not deemed necessary for additional spatial data to be obtained;
- Preferred alternatives are assumed to be feasible and reasonable; and
- It is assumed that the geometric design of the preferred access to site Option 1 is a feasible alternative.

1 INTRODUCTION

1.2 Description of Project

It was reported in 2014 that the automotive industry encompassed 30% of the South African industrial sector, employed more than 100 000 people and that in 2013 automotive exports, which include components and vehicles, exceeded R102 billion (which equates to 11.1% of the total South African (SA) exports for the year).¹ According to the KwaZulu-Natal Automotive Supplier Park (ASP) Pre-feasibility Study, 2015, the automotive industry is also South Africa's leading manufacturing sector and the largest attractor of direct foreign investment in manufacturing. It further states that the industry's vision for 2020 is to double production levels to 1.2 million units, with much stronger development of the local manufacturing component.

The importance of the automotive industry to the South African economy was further highlighted in 2013 by the launch of the Automotive Production and Development Programme (APDP), and the Automotive Supply Chain Competitiveness Initiative (ASCCI). The purpose of these initiatives is to support new investment in the automotive industry and to enhance localisation, production and supplier capabilities.²

Although the majority of the automotive industry is located in the Eastern Cape, the automotive manufacturing activity in KwaZulu-Natal (KZN) accounts for over 25% of South Africa's automotive manufacturing activity.³ The automotive sector is furthermore one of the four major lead sectors identified in the Industrial Policy Action Plan IV (IPAP) which underscores the framework for the implementation of the National Industrial Policy Framework (NIPF) in addition to the New Growth Path.

Toyota SA is currently at the forefront of automotive manufacturing in South Africa and has significantly contributed to the KZN economy. In light of this, the main objective of the KZN Automotive Supplier Park (ASP) is to support Toyota SA Motors, who is the only Original Equipment Manufacturers (OEM) based in KZN, and to further attract other OEMs. This would unlock investment opportunities, provide sustainable jobs and advance the OEMs growth trajectory in KZN. A preferred site was identified at Illovo South and this site formed the base of the initial pre-feasibility study for an ASP in KZN. In November 2015, the KZN MEC for Economic Development, Tourism and Environmental Affairs (EDTEA) requested that the Dube TradePort Corporation (DTPC) join the project team and take responsibility for acquiring the preferred development site from Illovo Sugar SA (Pty) Ltd.

The DTPC completed this acquisition process and it is envisaged that the DTPC will apply for the ASP site to be designated as part of the DTP Special Economic Zone (SEZ). As mentioned

¹ <https://www.businesspartners.co.za/en-za/entrepreneurs-growth-centre/useful-articles/manufacturing/south-africa%E2%80%99s-automotive-industry-at-a-glance> Accessed 12 June 2018

² <https://www.businesspartners.co.za/en-za/entrepreneurs-growth-centre/useful-articles/manufacturing/south-africa%E2%80%99s-automotive-industry-at-a-glance> Accessed 12 June 2018

³ <http://kzntopbusiness.co.za/site/kzn-top-businesses/Durban-Automotive-Cluster-%28DAC%29/page/9201> Accessed 12 June 2018

previously, apart from the automotive sector identified as a priority sector in terms of the IPAP, the SEZs are seen as policy instruments to advance industrialisation in South Africa. Making the KZN ASP part of the DTP SEZ will, therefore, ensure strategic alignment with government policies.

GIBB has been appointed by the DTPC to carry out the town planning rezoning application, in terms of the Spatial Planning and Land Use Management Act, 2013 (SPLUMA), to allow the establishment of an industrial township for the proposed ASP. This appointment includes undertaking an application for Environmental Authorisation (EA), subject to a Basic Assessment (BA) process, a Water Use License Application (WULA) and the associated specialist studies.

The above legislative processes are applicable to the proposed construction of the KZN ASP, the proposed sewer line connection from the development site to the existing Kingsburgh Wastewater Treatment Works (WWTW) and the proposed 132kV electrical powerline from the existing Kingsburgh substation to a proposed 132kV substation on the site for the KZN ASP.

The Department of Environmental Affairs (DEA) is the Competent Authority for the project. The proposed project triggers 'listed activities' as defined by Government Notice GNR 983 and 985, and as such, an Environmental Authorisation by way of a Basic Assessment process, in terms of the National Environmental Management Act, 1998 (No.107 of 1998) [NEMA]), will be required before activities can commence. The Draft Basic Assessment Report (DBAR) has been compiled in accordance with the requirements set out in the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) and with input from various specialist studies.

The DBAR is available for public review and comment for a period of 30 days from 25 October to 25 November 2019. Following the commenting period, the Final BAR will be updated (with the comments received upon public review of the DBAR) and submitted to the Department of Environmental Affairs (DEA) for consideration towards an Environmental Authorisation.

1.3 Details of the Applicant

The Dube TradePort Corporation (DTPC) is the Applicant for Environmental Authorisation of the proposed industrial township for the ASP, associated sewer line and powerlines. The details of the Applicant can be found in Table 1-1 below.

Table 1-1: Details of the Applicant

Project Applicant:	Dube TradePort Corporation
Contact Person:	Mr Hamish Erskine
Physical Address:	07 Umsinsi Junction, 290 South, La Mercy, 4399
Postal Address:	PO Box 57757, King Shaka Airport

Postal code:	4407	Fax:	032 814 0100
Telephone:	032 814 0000	Cell:	n/a
E-mail:	hamish.erskine@dubetradeport.co.za		

1.4 Details of the Environmental Assessment Practitioner and Specialists

GIBB is an integrated group of scientists, project managers, engineers and architects providing cost-effective solutions and specialist services in a wide range of disciplines. The multi-disciplinary consulting, management and design approach allows for the execution of projects in a holistic way, as this is believed to be the best approach to fully meet the needs of our clients.

The GIBB Environmental Services Division has a formidable track record and comprises highly qualified and experienced technical staff *viz*, Environmental Scientists and Specialists, which collectively form the National Environmental Team. The team members have broad experience in terms of working on a range of environmental projects within the public and private sector across South Africa.

The tables below provide a summary of the EAP, Technical Reviewer and Specialists involved in the BA process. Please refer to **Appendix I** for relevant experience and *curriculum vitae* of the EAP.

Table 1-2: Details and Expertise of the EAP

Project EAP:	GIBB (Pty) Ltd		
Contact Person:	Ms Natasha Lalie		
Role in Project:	Process management; Specialist team management; Public Participation Process, management, presentations and liaisons; and Report compilation.		
Physical Address:	2 nd Floor, 54 Norfolk Terrace, Norfolk House, Westville, 3630		
Postal Address:	P.O. Box 1365, Westville, 3630		
Postal code:	3630	Fax:	031 266 3310
Telephone:	031 267 8560	Cell:	-
Email:	nlalie@gibb.co.za		
Expertise to conduct EIR:	<p>Natasha has an MSc (Environment and Society) from the University of Pretoria and has been an Environmental Assessment Practitioner (EAP) for nearly sixteen years.</p> <p>She has undertaken numerous Screening and Feasibility Studies, Scoping Reports, Environmental Impact Reports (EIR's) and Environmental Management Programmes (EMPr's), as required by the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended and the EIA Regulations of 2006, 2010 and 2014 (as amended).</p> <p>She has also undertaken Integrated Water Use Licence Applications (IWULA's) for a number of projects, as required by the National Water Act, 1998 (Act No. 36 of 1998).</p>		

	<p>She has been involved in a wide range of projects, which include waste management, industrial, township establishments, mixed-use development, road upgrades, infrastructure developments, change of land use, lodge developments, proposed bulk water pipelines, proposed transmission powerlines, proposed filling stations, shopping centre developments and so on. She has worked extensively in South Africa, particularly in KwaZulu-Natal and Gauteng.</p> <p>Key experience includes:</p> <ul style="list-style-type: none"> – Environmental Impact Assessment, including Basic Assessments, Public Participation and coordination and review of specialist studies for a variety of projects including infrastructure and mixed-use developments; – Tender and proposal compilations for Environmental Services; – Integrated Water Use Licence Applications; and – Waste Management Licence Applications.
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Table 1-3: Details of Technical Reviewer & Support Staff

Project Role	Name	Experience
Technical Peer Review of Reports to ensure that they meet legal requirements	Ms Elisabeth Nortje	<p>A registered professional Environmental Scientist with 18 years of experience, Elisabeth Nortje specialises in project management, compilation, technical as well as expert peer review of Environmental Impact Assessments (EIAs) and related documents and processes in the energy, infrastructure and various other sectors. She is a Discipline Leader within the GIBB Environmental Services Division.</p> <p>Elisabeth has worked on a number of EIAs including the construction and operation of the Nuclear-1 Power Station for which she is the EAP. She has further been involved in the management and compilation of Strategic Environmental Assessments for master planning purposes, Environmental Management Programmes (EMPRs), Water Use License Applications (WULAs), and environmental input into engineering design and Geological Sensitivity Assessments. Her post-graduate studies include topics in Environmental Management, Mining and the Environment, Integrated Environmental Management and Environmental Impact Assessment as well as advanced studies in Geographic Sciences and Sustainable Development.</p> <p>Her key experience includes:</p> <ul style="list-style-type: none"> - Technical and expert as well as peer review of documents in terms of relevant local South African and international legislation, as well as compliance with IFC and World Bank requirements; - Management of Environmental Impact Assessment Practitioners (EAPs); - Manage, review, write and give technical and advisory input into large scale EIAs and environmental processes;

		<ul style="list-style-type: none"> - Identification of regulatory environmental triggers and risks associated with proposed projects; - Environmental management planning; - Authority liaison and engagement; - Management of specialist teams; - Public Participation Processes and consultation, including coordinating, facilitating and managing such processes; - Project and Financial Management of environmental projects in the energy, infrastructure, mining and government sectors; - Strategy implementation; and - Mentoring and training of junior team members.
<p>Senior Environmental Scientist</p>	<p>Sarah Caulfield</p>	<p>Sarah Caulfield (née Baxter) is a Senior Environmental Scientist and Professional Natural Scientist (Pr.Sci.Nat.) with 10 years of experience. She is the Discipline Lead for the Licensing, Sustainability and Specialists (LSS) Unit, operating within the Environmental Division at GIBB (Pty) Ltd.</p> <p>Sarah has experience in a wide range of environmental management project types, including (integrated) applications for Environmental Authorisation (subject to Basic Assessment, as well as Scoping and Environmental Impact Assessment processes), Waste Management Licenses, Water Use Authorisations and environmental compliance monitoring.</p> <p>Her key experience includes:</p> <ul style="list-style-type: none"> - Making applications for Environmental Authorisation, subject to Basic Assessment or Scoping and EIA processes, in line with the requirements of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and its EIA Regulations; - Waste Management License applications, as required in terms of the National Environmental Management Waste Act, 2008 (Act 59 of 2008) (NEMWA) and its associated Listed Activities; - Making application for Water Use Authorisations, as required by Section 21 of the National Water Act, 1998 (Act 36 of 1998) (NWA); - Compilation of construction- and operational-phase Environmental Management Programmes (EMPr's), as well as Environmental Control Officer (ECO) duties comprising compliance monitoring and auditing of EMPr implementation; - Public participation processes in line with the requirements of the NEMA and the relevant guidelines; - Pre-application environmental and legislative Screening Assessments; and - Environmental Legal Due Diligence Assessments.

Environmental Scientist	Nishkar Maharaj	<p>Nishkar Maharaj is a registered Professional Natural Scientist (with four years' experience) in the field of Environmental Science, Nishkar Maharaj is an Environmental Scientist with four years of experience within the Environmental Licensing Unit at GIBB. Nishkar has a background in environmental management having demonstrated and lectured for various modules within the BSc. Environmental Sciences programme in his post-graduate year.</p> <p>Since 2014, Nishkar has gained key consulting experience through his involvement in making applications for to environmental authorisation, subject to Basic Assessment or Scoping and EIA processes, compilation of environmental impact assessments, including basic assessments, scoping reports, environmental impact reports, screening assessments, environmental management programmes, environmental due diligence assessments, public participation and stakeholder engagement. He has experience in Integrated Water Use Licence Applications (WULA) and Integrated Water and Waste Management Plans (IWWMP) and Environmental auditing, including environmental compliance audits. He has been involved in project co-ordination for various environmental, water and waste projects.</p>
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Table 1-4: Details of the Specialists

Name of specialist	Section/s contributed to	Title of specialist report/s as attached in Appendix D
Wetland Assessment		
Ms Salicia Gounden	Section 3.1.10	Wetland Assessment Report for the DTPC Automotive Supplier Park
Mr Adam Teixeira-Leite		Wetland Assessment Report for the DTPC Automotive Supplier Park: Sewer line
Mr Adam Teixeira-Leite		Wetland Assessment Report for the DTPC Automotive Supplier Park: Powerline
Mr Adam Teixeira-Leite		Wetland Offset Strategy for the DTPC Automotive Supplier Park
Ecological Assessment		
Ms Robyn Phillips	Section 3.1.9	Dube TradePort Proposed Automotive Supplier Park at Illovo South, Durban: Ecological Assessment
Mr Thembela Mshengu		Dube TradePort Proposed Automotive Supplier Park at Illovo South, Durban Sewer line
		Dube TradePort Proposed Automotive Supplier Park at Illovo South, Durban Powerline
Heritage Assessment		
Mr Trust Mlilo	Section 3.7	A Phase 1 Archaeological and Heritage Impact Assessment Report for the Proposed KZN Automotive Supplier Park (ASP), Access Road and Industrial Development on the Remainder of the Farm Nogi No. 17469, Illovo, within eThekweni Municipality, KwaZulu-Natal

Name of specialist	Section/s contributed to	Title of specialist report/s as attached in Appendix D
		A Phase 1 Archaeological and Heritage Impact Assessment Report for the Proposed sewer line route from the KZN ASP site to the existing Kingsburgh Wastewater Treatment Works (WWTW) at Illovo, Durban South within eThekweni Municipality, KwaZulu-Natal
		A Phase 1 Archaeological and Heritage Impact Assessment Report for the Proposed 132kV Transmission Powerline from the existing Kingsburgh substation to the proposed substation at the KZN ASP at Illovo, Durban South, within eThekweni Municipality
Estuarine Assessment		
Dr Nicolette Forbes	Section 3.1.8	Estuarine Impact Assessment for the KZN ASP development
Hydrological Assessment (Flood line Assessment)		
Mr Aphiwe Nodada	Section 3.1.5	Flood line Assessment for an Automotive Supplier Park – Illovo, KwaZulu-Natal
Mr Andrew Hull		Proposed KZN ASP Powerline and Sewer line: Hydrological Assessment and 1: 100 year flood lines
Aquatic Assessment		
Ms Karin Loukes	Section 3.1.6	Aquatic Impact Assessment for the Proposed Sewer and Powerline Infrastructure of the KZN Automotive Supplier Park Township Establishment, Illovo KZN
		Aquatic Biomonitoring Assessment for the KZN Automotive Supplier Park Township Establishment, Illovo KZN
Geohydrological Assessment		
Ms Hendrik Botha	Section 3.1.4	Desktop Geohydrological Assessment for the Proposed ASP Sewer and Powerlines Report
		Hydrogeological Assessment for the Automotive Supplier Park (ASP) Project Report
Environmental Noise Report		
Mr John Hassall	Section 2.4.7	Environmental Noise Report Proposed KZN Automotive Supplier Park
Agricultural Potential Assessment		
Mr John Phipson	Section 3.1.2	Agricultural Impact Assessment of the Proposed Conversion of Land Use from a Sugarcane Farming Activity to an Industrial Township, incorporating the Establishment of a KwaZulu-Natal ASP
Socio-Economic Assessment		
Mr Corne van Rooyen	Section 3.6	KZN ASP Socio-Economic Impact and Market Needs Assessment Report

Name of specialist	Section/s contributed to	Title of specialist report/s as attached in Appendix D
Mr Eugene de Beer		KZN ASP Revision: Access Options Socio-Economic Impact Assessment
Air Quality Assessment		
Dr Oladapo Akinshipe	Section 2.4.6	Air Quality Specialist Report for an Automotive Supplier Park, KwaZulu-Natal: Road-use impacts
Dr Terri Bird		
Visual Assessment		
Mr Tony Danev	Section 3.8	Visual Impact Assessment for Illovo Automotive Supplier Park, Illovo, Durban
Mr Leo Quayle	Section 3.8	Visual Impact Assessment for the Proposed Development of a 132kV Powerline and Associated Substation for the Proposed Automotive Supplier Park, Illovo, KZN
Stormwater Management Plan		
Mr Nic Brien	Section 2.4.2	Stormwater Management Plan for an Automotive Supplier Park– Illovo, KwaZulu-Natal
Mr Aphiwe Nodada		
Traffic Impact Assessment and Transportation Plan		
Mr Anand Pillay	Section 2.4	KwaZulu Natal Automotive Supply Park Township Establishment: Traffic Impact Assessment
		KwaZulu Natal Automotive Supply Park Township Establishment: Transport Master Plan
Preliminary Design Report for Electricity Supply and Reticulation		
Mr Antony Londt	Section 2.4.3	KZN ASP: Electrical Preliminary Design Report
Civil Engineering Services Report for Water and Sanitation		
Mr Mark Marais	Section 2.4	KZN Automotive Supplier Park: Civil Engineering Services Report

1.5 Details of Competent/Relevant Authority

The Department of Environmental Affairs (DEA) is the Competent Authority (CA) for this Application in terms of Section 24C(2)(d)(ii) of NEMA, 1998. Also, as per the National Department of Treasury, the Applicant, Dube TradePort Corporation (DTPC) is further listed as a legislated Public Institution in terms of the Public Finance Management Act, 1999 (Act No. 1 of 1999) (Schedule 3C) in the KZN Province and reports to the MEC. Thus the Competent Authority for their applications is confirmed to be the National DEA.

A pre-application meeting was therefore held with the DEA on 31 October 2018. The objectives of this meeting were to obtain guidance from the DEA regarding the execution of the BA Process under the 2014 EIA Regulations (as amended), to provide the background to the project and obtain an understanding of the DEA requirements. Refer to the minutes and attendance register of the pre-application meeting in Appendix A.

The Application for Environmental Authorisation was submitted to the DEA on 25 October 2019. The contact details of the DEA Case Officer are indicated in Table 1-5 below.

Table 1-5: Details of Competent Authority

Competent Authority:	Department of Environmental Affairs (DEA)		
Case Officer	Mr Jay-Jay Mpelane		
Address:	Environmental House 473 Steve Biko Road Pretoria		
Postal code:	0001	Fax:	--
Telephone:	012 399 9404	Cell:	--

1.5.1 Project Title

Proposed KwaZulu-Natal (KZN) Automotive Supplier Park (ASP) incorporating industrial development on the remainder of the Farm Nogi No. 17469, at Illovo and construction of the associated sewer line and electrical powerline, within the eThekweni Municipality, KwaZulu-Natal.

2 ACTIVITY INFORMATION

2.1 Description of Project

2.1.1 Project Description

South Africa currently has three dedicated ASPs in the country which were conceptualised and implemented by the Automotive Industry Development Centre (AIDC) and other relevant international and local stakeholders, namely:

- the East London ASP (ELASP);
- the Nelson Mandela Bay Logistics Park (NMBLP) in Uitenhage; and
- the Rosslyn ASP (RASP) in Pretoria.

The aim of the ASPs is to accommodate component suppliers and service multiple Original Equipment Manufacturers (OEMs) from a centralised location. The primary objective of establishing these ASPs was thus to stimulate investment in major specialised infrastructure and integrated logistics services to the automotive industry in close proximity to OEMs, with the ultimate aim of increasing local content, reducing manufacturing costs and increasing competitiveness amongst OEM suppliers. The South African National Government was involved in the establishment of all three of the abovementioned ASPs.

In line with the abovementioned ASPs, the proposed ASP development at Illovo herein referred to as ‘the project’, is intended to create an enabling environment to establish an ASP to support the OEM’s based in KZN, and to further attract additional OEMs to the region.

The proposed development entails a large scale industrial park (~264.8ha) comprised of four large platforms (for warehousing) ranging in size from approximately 37ha to 56ha that will be levelled by cut and fill construction methods. The site will include a municipal services node comprising a potable water reservoir and an electrical substation. Various land uses such as general industry, industrial and commercial park and administration are proposed for establishment as part of the proposed project. The remainder of the site will be set aside for open space/conservation uses in order to maintain ecological corridors through the site.

To provide access to these various land use areas, the establishment of a central boulevard with a road reserve of approximately 50m in width and 1,76km in length, running across the site from the new N2 interchange, and linking with the P197, is proposed. This proposed central boulevard will serve as a public access road. A number of private roads that will be access-controlled, will link off this central boulevard, to the various industrial land use areas. Regardless of the access option to site, the central boulevard will extend between the P197 and N2. Refer to Figure 2-1 for an illustration of the proposed central boulevard from the P197 across the site.

Access to the site will either be obtained from maintenance of the status quo of existing roads in the area (without any road upgrades) or on a proposed interchange on the N2 (refer to the alternative road accesses in Figures 2-8 to 2-12). The position and geometric design of the new interchange is subject to finalisation and acceptance of the Geometric Layout Plan by SANRAL, the Traffic Impact Assessment (TIA) and the Traffic Master Plan. Refer to Section 2.1.3 that provides a description of the various access options proposed.

The project will further include the construction of service infrastructure such as:

- connecting to an existing municipal bulk water supply line, running adjacent to the P197, together with the construction of a new reservoir on site for the storage of potable water;
- constructing a 132kV electrical substation, which will link to the existing Kingsburgh Substation, via a new 132kV overhead powerline; and
- as there is no municipal sewer main located close to the site, a sewer pump station is proposed on the southern portion of the site as well as a sewer rising main adjacent to the road reserve of P197 and R603, and within municipal roads to the existing Kingsburgh Waste Water Treatment Works (WWTW).

Construction of the full development is expected over a duration of 13 years. Construction is will take place in phases and Phase 1A is anticipated to commence in August 2021. Operation of Phase 1A is expected to commence in 2023. Phase 1B in 2025. Phase 1C in 2028. Phase 1D in 2033.



Figure 2-1: Proposed Central Boulevard from the P197 to the N2

N.B. Proposed central boulevard is located between the P197 and the N2.

2.1.2 Site Description and Locality

(a) Proposed KZN ASP Site

The property (also referred to as the Township Establishment Area (TEA)) earmarked for the proposed development of the KZN ASP is described as the remainder of the Farm Nogi No. 17469, in Illovo, within the jurisdiction of the eThekweni Municipality, in KwaZulu-Natal. The size of the property is approximately 400ha. The location of the proposed development site, within the context of the larger property, is shown in Figure 2-2.

The property is therefore located south of Durban and adjacent to the N2, between Winkelspruit and Umgababa areas, in KZN Province. The site is strategically located between automotive-related manufacturing industries in Prospecton and associated facilities planned at Umkomaas and thus abutted by major transport routes, including Provincial Road P197 on the western boundary of the site and the N2 on the eastern boundary of the site.

Approximately 1.5km to the north of the property is the R603, which is seen as a potential freight route within the municipality. The southern boundary of the property is the uMsimbazi River and the northern boundary is the iLovu River. The property is located between formal urban areas in the east (Kingsburgh and Illovo Beach) and more dispersed semi-rural dwellings and associated pockets of subsistence farming to the west and south. The property is primarily used for agricultural purposes, with sugar cane production covering the majority of the land area. The property was previously owned by Illovo Sugar SA Ltd, but has now been purchased and falls under the ownership of the DTPC. Access to the site is presently gained from the P197. Refer to current access point in Figure 2-3.

Table 2-1 provides a summary of information on the property proposed for development.

Table 2-1: Property Information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	109
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh,
Property Description	Remainder of the Farm Nogi No. 17469
SG Code	NOET00000001746900000
Title Deed No.	T012751/2016
Co-ordinates of the boundary of the property	30° 06' 27.66''S and 30° 50' 45.74''E 30° 06' 56.87''S and 30° 50' 27.59''E 30° 07' 24.54''S and 30° 50' 06.95''E 30° 07' 26.68''S and 30° 49' 44.14''E 30° 07' 11.71''S and 30° 49' 25.21''E 30° 06' 49.80''S and 30° 49' 21.04''E 30° 06' 36.12''S and 30° 49' 27.74''E 30° 06' 22.24''S and 30° 49' 30.64''E 30° 06' 22.32''S and 30° 49' 47.70''E

30° 06' 24.03''S and 30° 50' 02.94''E
 30° 06' 20.89''S and 30° 50' 15.49''E
 30° 06' 20.61''S and 30° 50' 37.08''E

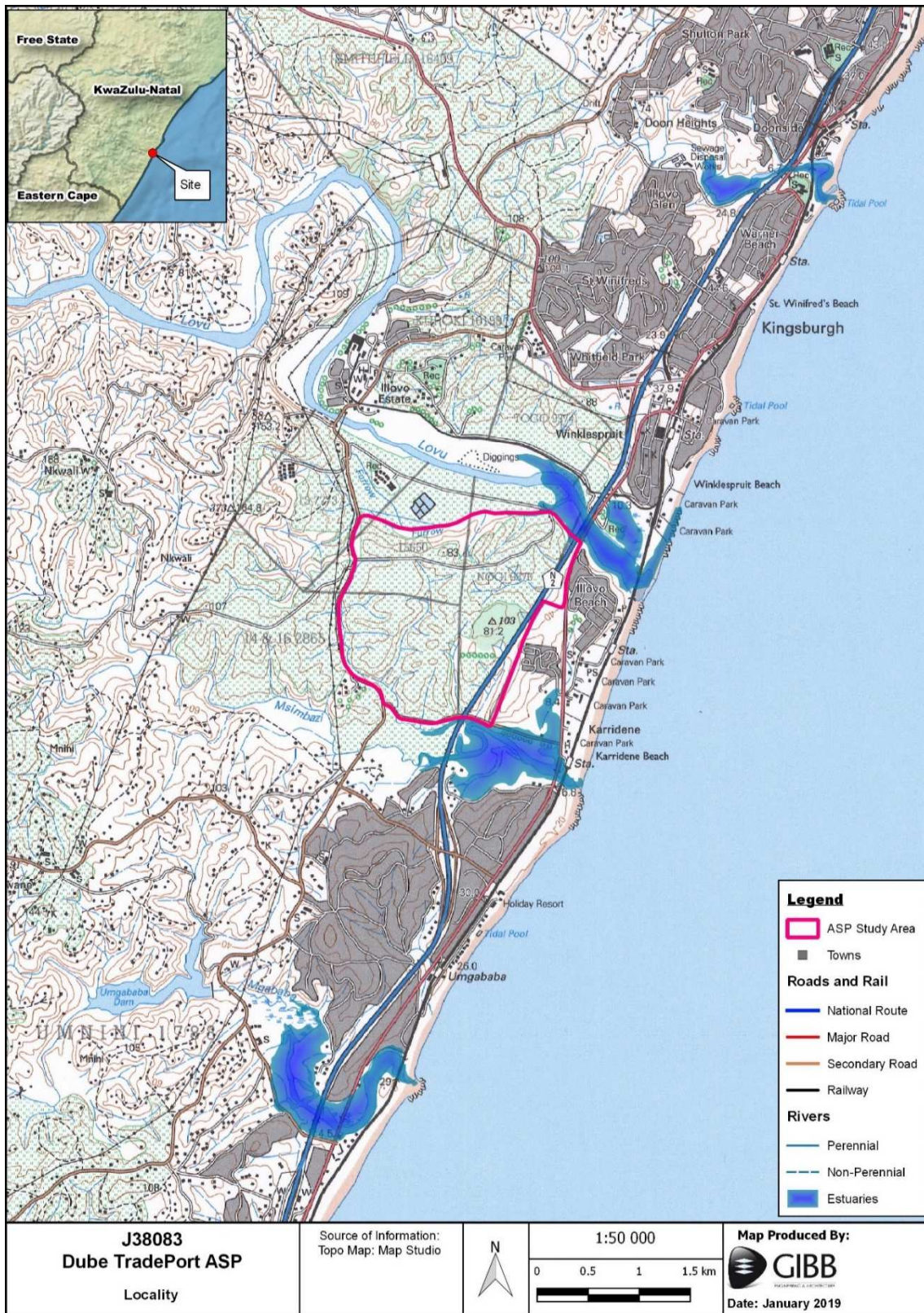


Figure 2-2: Locality Map of KZN ASP site

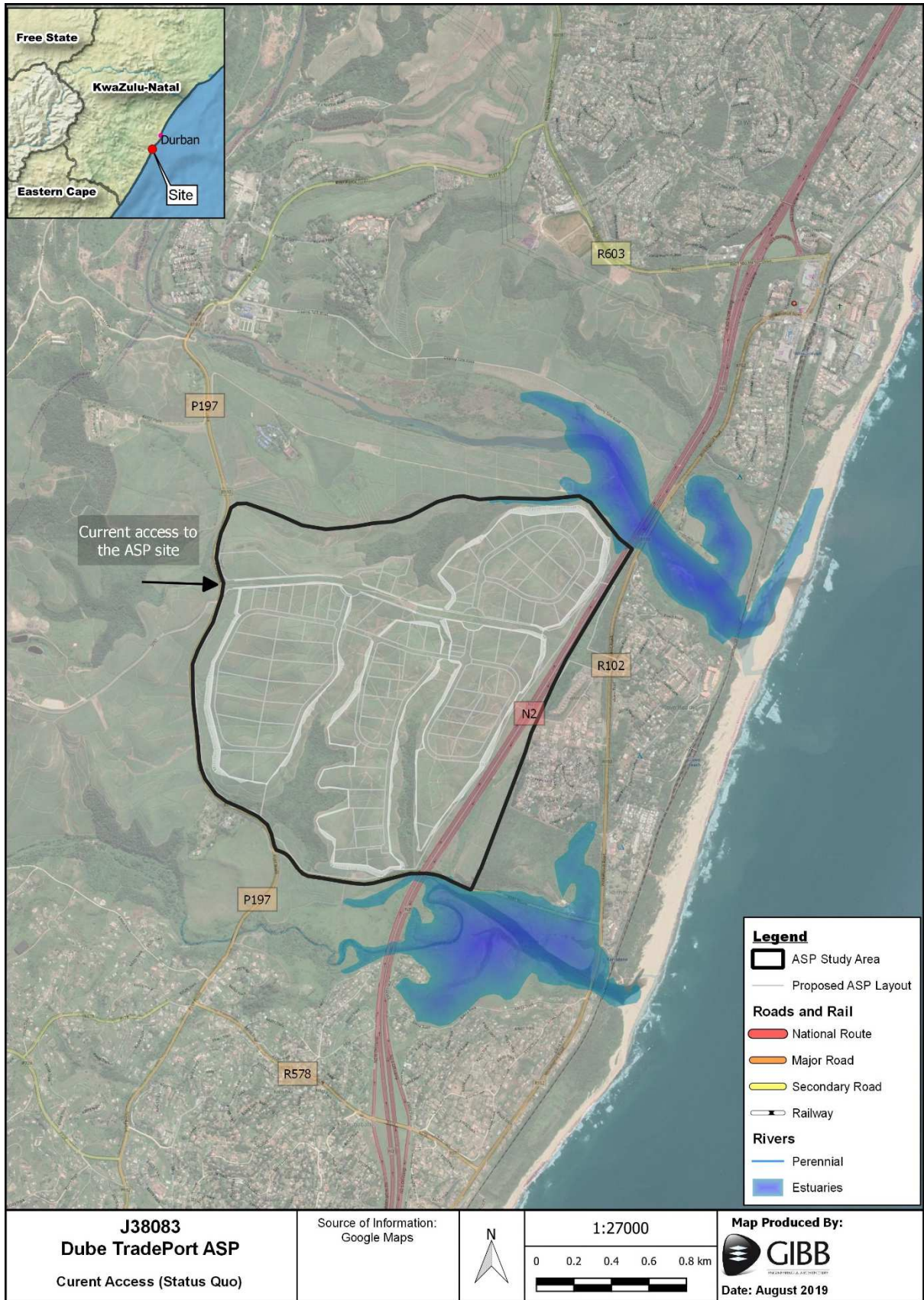


Figure 2-3: Locality Map of current access to the KZN ASP site

(b) Proposed Sewer line Route Alignment

The proposed sewer line route stretches from the proposed sewer pump station on the southern boundary of the KZN ASP site to the existing Kingsburgh Wastewater Treatment Works (WWTW) in the north. Refer to the sewer line route alignment in Figure 2-2. The route is therefore approximately 8.7km in length and will commence at the southern boundary of the proposed KZN Automotive Supplier Park and will continue in a westerly direction along this boundary for approximately 532m. It will thereafter travel in a northerly direction adjacent to the road reserve of the P197 i.e. along the western boundary of the KZN ASP site. The entire pipeline will be trenched until it reaches the existing steel bridge crossing of the iLovu River. The proposed sewer line will be attached to the existing steel bridge and will be trenched for the remainder of the route until it reaches the existing Kingsburgh Waste Water Treatment Works (WWTW).

After crossing the iLovu River, the route will travel in a north-easterly direction adjacent to the road reserve of P197 and pass through existing built-up areas such as the Illovo Industrial area, and then through existing land uses such as cane land and residential areas. At the T-Junction with the R603, the proposed pipeline bends at 90 degrees to the left and travels adjacent to the road reserve of the R603. The pipeline route travels north, past existing residential areas of Whitfield Road, adjacent to the road reserve of the R603. It then turns right along the road reserve of 10570 Street for approximately 180m. It thereafter bends to the right along the road reserve of Santo Alberto Road for approximately 1,243m. It passes through existing built-up areas (mainly residential). The route lastly turns right along the road reserve of Longacres Drive for 452m till it reaches the existing Kingsburgh WWTW. Refer to Table 2-2 for the coordinates along the sewer line route alignment. Refer to Figure 2-4 for the locality map of the proposed sewer line route alignment. Please see the Civil Services Report (Appendix E) for more details.

Table 2-2: Corridor table detailing location and width of the sewer line servitude

		Latitude	Longitude	Corridor Width
Start	Proposed sewer pump station at the southern portion of the KZN ASP site	30°07'24.91"S	30°49'51.98"E	3m
Middle	Illovo Industrial area	30°05'35.19"S	32°49'36.90"E	
End	Existing Kingsburgh Wastewater Treatment Works	30°04'31.48"S	30°51'24.22"E	

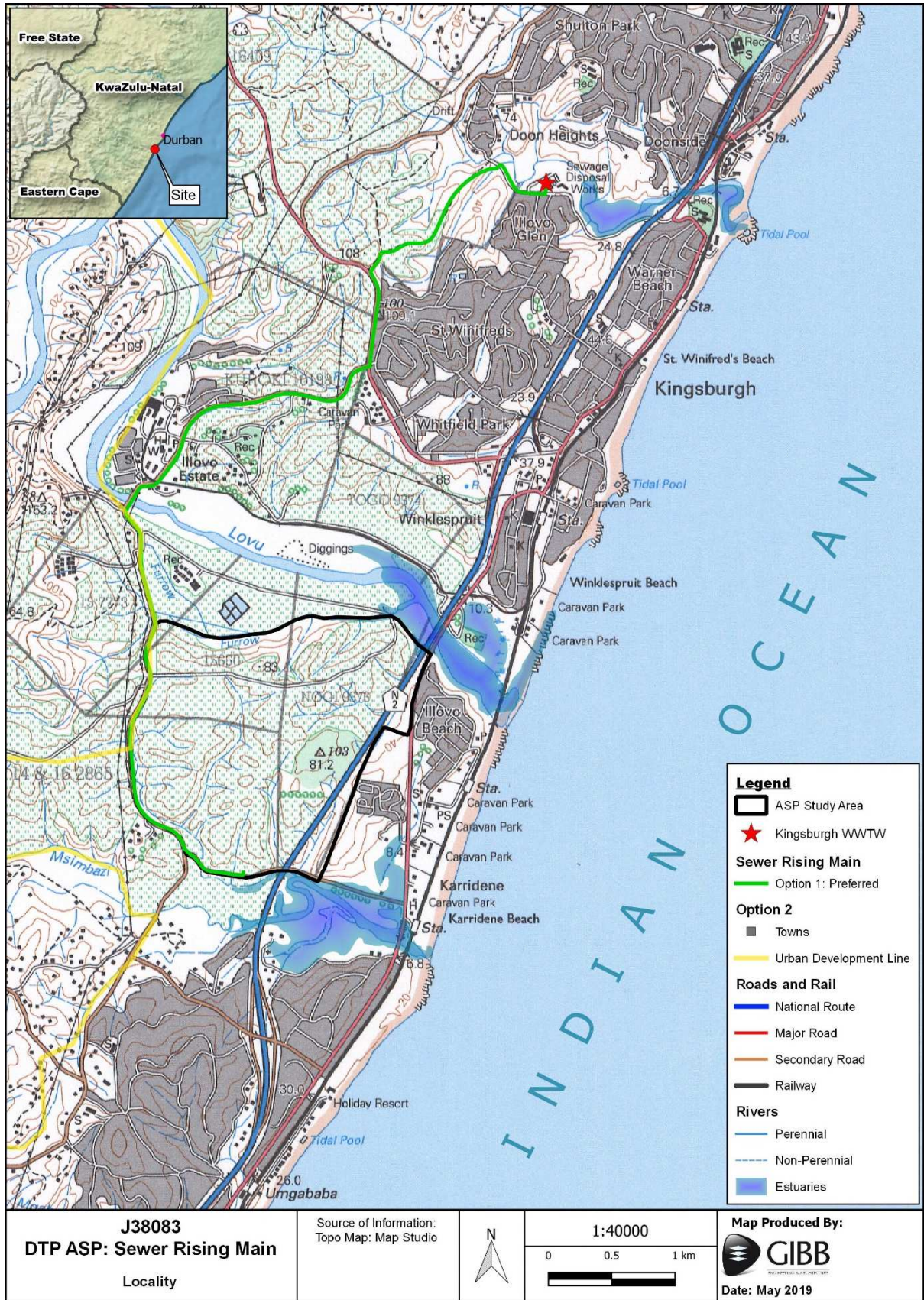


Figure 2-4: Locality Map of proposed sewer rising main

(c) Proposed 132kV Electrical Powerline Route Alignment(s)

The three alternative powerline route options related to the proposed powerline stretches from the existing Kingsburgh Substation to the proposed substation on site. Refer to the route alignments of the three powerline routes in Figure 2-5. A servitude of 35m will be required for the construction and operational phase of the project.

Powerline Route Option 1:

Line option 1 is the shortest of the proposed powerline alternatives, at approximately 3.62 km in length. It commences at the existing Kingsburgh Substation, and travels south-west from the Kingsburgh substation, and passes the existing Illovo Farm House. It thereafter travels north-west for approximately 400m until turning south-west towards the iLovu River. It crosses the iLovu River near the Illovo Canoe Club and bends around the Mother of Peace Children’s Home on the other side of the river. The proposed pylon will be 230m from the Children’s Home. The line will then proceed south along the P197 before turning in a south-easterly direction towards the proposed substation on the KZN ASP site. The majority of the existing land use through which the powerline traverses is sugar cane land. Refer to Table 2-3 for property information along which the proposed route traverses and Table 2-4 for the co-ordinates along the proposed route. “Bends” refers to the proposed positions of the pylons.

Table 2-3: Property Information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	109
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh, Astra Park, Illovo Glen
Property Description	Remainder of the Farm Togo No. 9374 Remainder of the Farm Illovo No. 16946 Remainder of the Farm Nogi No. 17469
SG Code	NOET0000000937400000 NOET00000001694600000 NOET00000001746900000

Table 2-4: Corridor table detailing the location of the Option 1 Powerline Route

		Latitude	Longitude
Start	Kingsburgh substation	30°05'34.04"S	30°50'24.90"E
Middle	Bend 1	30°05'54.16"S	30°50'00.06"E
	Bend 2	30°05'47.09"S	30°49'44.97"E
	Bend 3	30°06'08.07"S	30°49'25.49"E
	Bend 4	30°06'26.02"S	30°49'31.08"E

		Latitude	Longitude
End	Proposed substation	30°06'31.70"S	30°50'00.74"E

Powerline Route Option 2:

Line option 2 is approximately 4.16 km in length and travels north from the existing Kingsburgh substation. It passes over a forested valley whereafter it travels west behind existing houses along Nelson Close and directly over a property in Poss Road, and immediately in front of properties in Draeger Crescent (including Serendipity Guest House). This line crosses the iLovu River closest to the iLovu River Bridge and crosses the P197 road. It then follows the existing powerline servitude alongside the P197 and then crosses the P197 until it crosses the sugar cane towards the proposed substation on the KZN ASP site. Refer to Table 2-5 for property information along which the proposed route traverses and Table 2-6 for the co-ordinates along the proposed route.

Table 2-5: Property Information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	109
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh, Astra Park, Illovo Glen
Property Description	Remainder of the Farm Illovo No. 16946 Portion 339 of the Farm Lower Illovo No. 17126 Portion 340 of the Farm Lower Illovo No. 17126 Portion 133 of the Farm Lower Illovo No. 17126 Remainder of the Farm Lower Illovo No. 17126 Portion 135 of the Farm Lower Illovo No. 17126 Portion 10 of the Farm Illovo No. 16946 Remainder of the Farm Nogi No. 17469 Portion 1 of the Farm Lot 15 No. 7773 Portion 1 of the Farm Lot 17 No. 15660
SG Code	N0ET00000001694600000 N0ET00000001712600339 N0ET00000001712600340 N0ET00000001712600133 N0ET00000001694600000 N0ET00000001712600135 N0ET00000001694600010 N0ET00000001746900000 N0ET00000000777300001

NOET00000001566000001

Table 2-6: Corridor table detailing the location of the Option 2 Powerline Route

		Latitude	Longitude
Start	Kingsburgh substation	30°05'37.45"S	30°50'21.84"E
Middle	Bend 1	30°05'26.97"S	30°50'21.72"E
	Bend 2	30°05'38.46"S	30°49'59.86"E
	Bend 3	30°05'51.10"S	30°49'57.07"E
	Bend 4	30°05'47.18"S	30°49'42.56"E
	Bend 5	30°06'04.90"S	30°49'20.70"E
	Bend 6	30°06'15.98"S	30°49'25.94"E
	Bend 7	30°06'35.43"S	30°49'23.77"E
End	Proposed substation	30°06'34.82"S	30°49'44.41"E

Powerline Route Option 3a:

Line option 3a is approximately 4.4 km in length and travels south-west from the existing Kingsburgh substation. It thereafter travels west past the main Illovo farmhouse for almost a kilometre before turning southeast towards the iLovu River. It crosses the river near the Illovo Canoe Club and bends towards the Mother of Peace Children’s Home on the other side of the river. The proposed pylon will be immediately adjacent to the children’s home. It then bends in a southerly direction along the P197 before turning southeast towards the proposed substation. The majority of the existing land use through which the powerline traverses is sugar cane land. Refer to Table 2-7 for property information along which the proposed route traverses and Table 2-8 for the co-ordinates along the proposed route. Refer to Table 2-7 for property information along which the proposed route traverses and Table 2-8 and Table 2-9 for the co-ordinates along the proposed route.

Table 2-7: Property Information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	109
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh, Astra Park, Illovo Glen
Property Description	Remainder of the Farm Togo No. 9374 Remainder of the Farm Illovo No. 16946 Remainder of the Farm Lot 23 No. 3253 Remainder of the Farm Nogi No. 17469
SG Code	NOET00000000937400000

	NOET0000000169460000
	NOET0000000032530000
	NOET0000000174690000

Table 2-8: Corridor table detailing the location of the Option 3a and 3b Powerline Route

		Latitude	Longitude
Start	Kingsburgh substation	30°05'36.92"S	30°50'26.94"E
Middle	Bend 1	30°05'52.50"S	30°50'16.09"E
	Bend 2	30°05'52.50"S	30°50'06.49"E
	Bend 3	30°05'51.10"S	30°49'57.17"E
	Bend 4	30°05'47.89"S	30°49'45.01"E
	Bend 5	30°06'03.28"S	30°49'31.91"E
	Bend 6	30°06'07.21"S	30°49'31.94"E
	Bend 7	30°06'11.50"S	30°49'33.36"E
	Bend 8	30°06'16.65"S	30°49'28.25"E
	Bend 9	30°06'23.03"S	30°49'30.43"E

Table 2-9: Corridor table detailing the location of the Option 3a Powerline Route

		Latitude	Longitude
Middle	Bend 10	30°06'27.80"S	30°49'38.49"E
End	Proposed substation	30°06'32.40"S	30°50'00.87"E

Powerline Route Option 3b:

Line option 3b is approximately 5.03 km in length and mirrors option 3a as it travels south from the existing Kingsburgh substation until it reaches the P197. It travels parallel to the P197 for an additional 400m before turning to the east and joining the proposed substation. The majority of the existing land use through which the powerline traverses is sugar cane land. Refer to Table 2-7 for property information along which the proposed route traverses and Table 2-8 and Table 2-10 for the co-ordinates along the proposed route.

Table 2-10: Corridor table detailing the location of the Option 3b Powerline Route

		Latitude	Longitude
Middle	Bend 10	30°06'28.61"S	30°49'27.63"E
	Bend 11	30°06'31.72"S	30°49'27.25"E
	Bend 12	30°06'36.92"S	30°49'28.71"E
	Bend 13	30°06'36.05"S	30°49'46.54"E

		Latitude	Longitude
	Bend 14	30°06'36.47"S	30°49'50.58"E
	Bend 15	30°06'39.54"S	30°50'00.33"E
End	Proposed substation	30°06'34.10"S	30°50'02.50"E

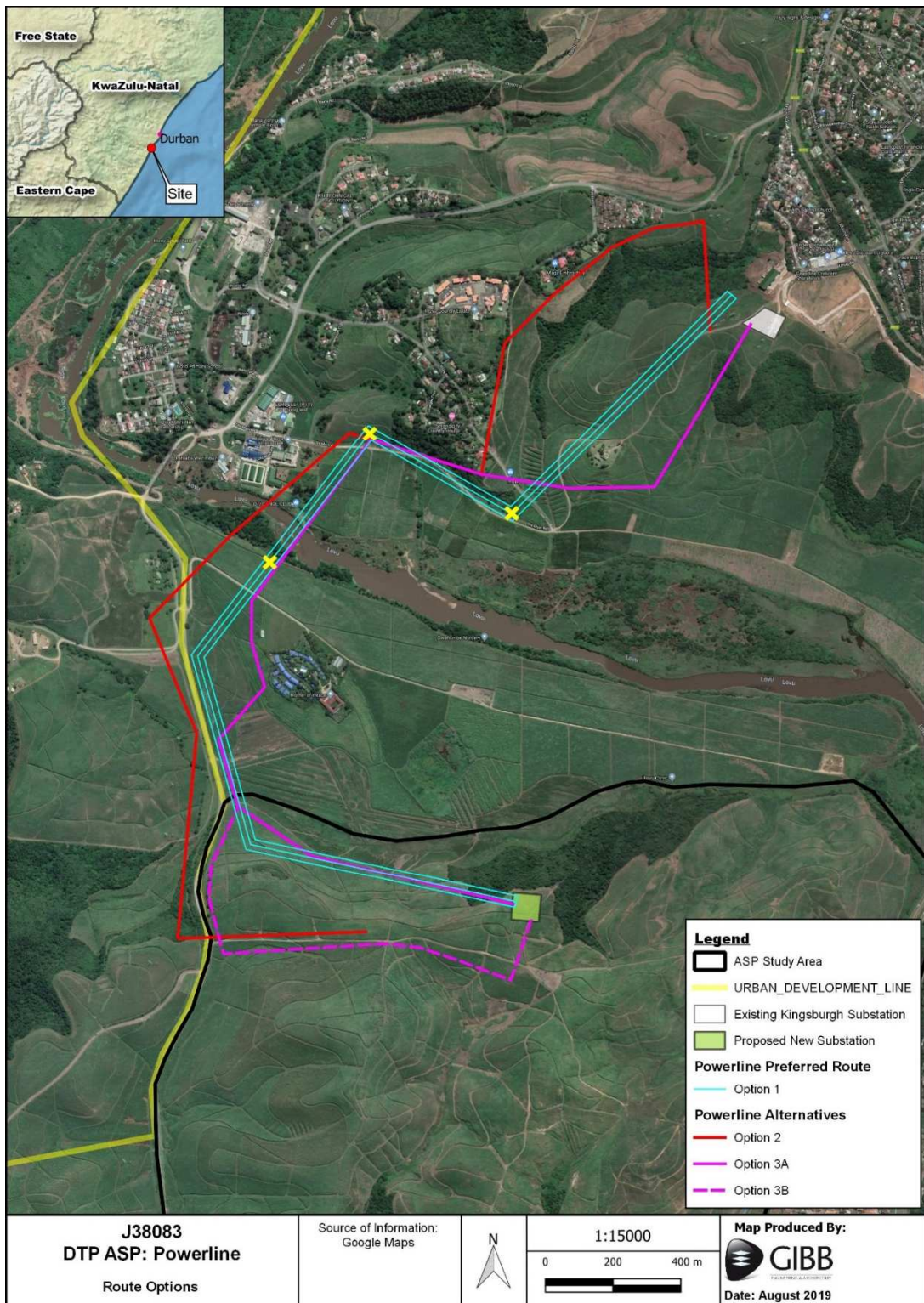


Figure 2-5: Locality Map of proposed powerline route alignments

2.1.3 Site Access

(a) Proposed Access Arrangements to the Site

Five access alternatives are considered for the development, as follows:

1. Option 0: Status quo of the existing road network will remain (no road upgrades);
2. Option 1;
3. Option 1c;
4. Option 1d; and
5. Option 3b.

Refer to the Traffic Impact Assessment in Appendix E for further detailed assessment of the above access options. These alternatives are described below:

Option 0

This option does not involve any road upgrades as the current state of the road network will remain in place to access the KZN ASP. Most vehicles entering the KZN ASP from the north are likely to exit the N2 at the Kingsburgh Interchange, travel along the R603 and then south along the P197 to the site. Vehicles from the south are likely to exit the N2 at the Umnini Interchange, travel along the P578 and then north along the P197 to get to the site. The vehicles will use the same routes to exit the site and get back on to the N2 in either direction. Refer to the Option 0 route in Figure 2-6.

The R603 also known as the Umbumbulu Road, is an important regional route intersecting with the N3 in the west near Camperdown and ending near the N2 at Kingsburgh south of Durban. The R603 bypasses the congestion of the N3/N2 EB Cloete 'spaghetti junction' in Durban. The Umbumbulu Road is therefore often used as an alternative for both travellers and freight traffic alike. The KZN ASP can, therefore, be accessed from the N2 Kingsburgh ramp and from the N3 in Camperdown to access P197 to enter the KZN ASP. This road is currently used by trucks of the industrial activities happening that in that area and the Durban Solid Waste (DSW) trucks moving to the regional landfill site close to the KZN ASP.

Refer to Table 2- 11 for location information of this access option.

Table 2-11: Location information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	109
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh,
Property Description	No road upgrades involved, therefore no properties will be acquired.

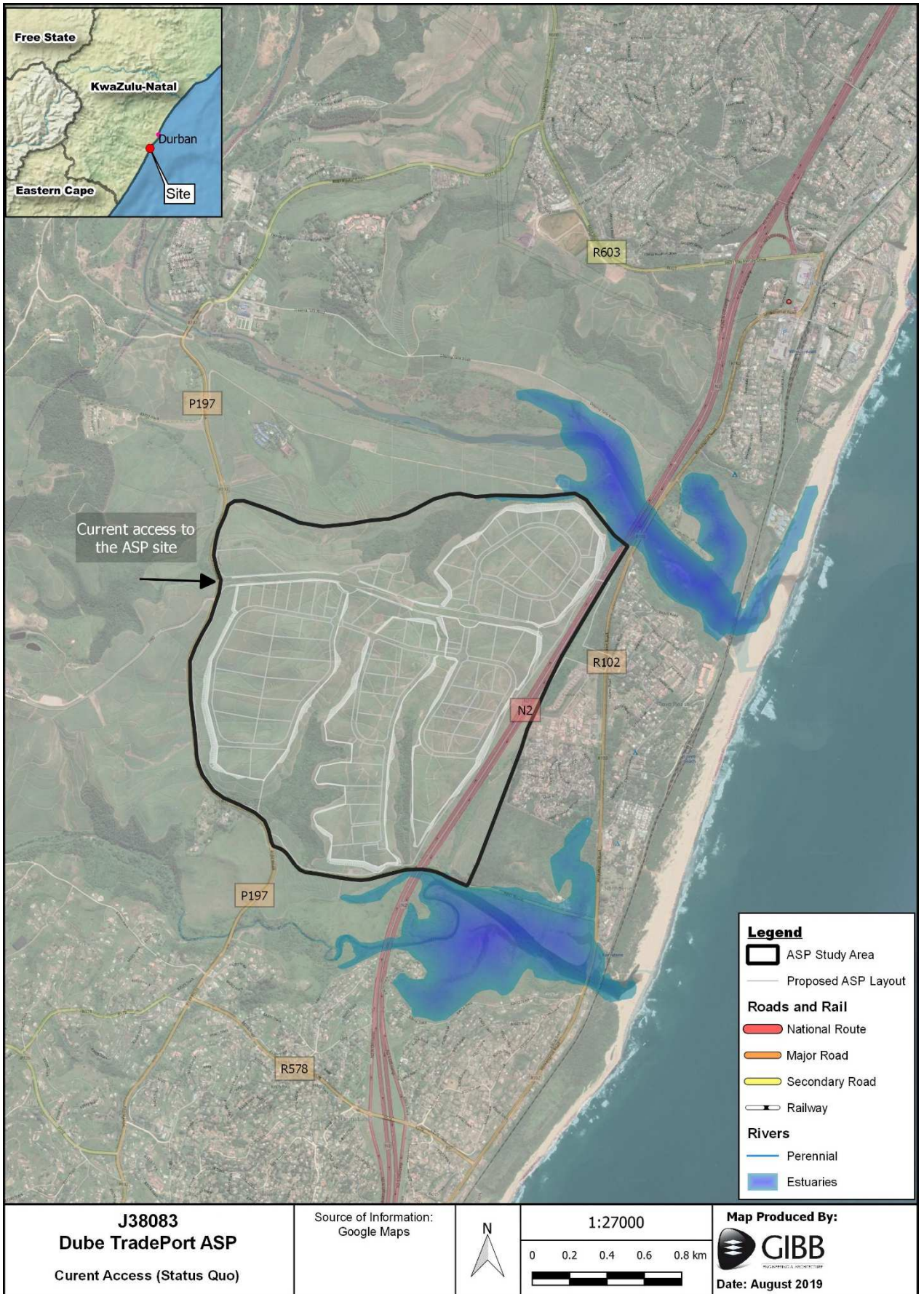


Figure 2-6: Option 0 route access

Option 1

The overarching location in which the Option 1 and its two variations (Option 1c and Option 1d) occur is shown in the accompanying map (Figure 2-7). Option 1 will consist of a new full narrow diamond interchange off the N2 (Figure 2-8). Direct entry to and exit from the boulevard from the north and south will be via on- and off-ramps in both directions. Access includes the P197 on the west side.

It is to be expected that the local traffic in the area from surrounding neighbourhoods will also gain access to the site via the R603, P578 and P197 routes. Refer to the TIA in Appendix E.

The configuration of Option 1 is illustrated as per Figure 2-8 and is included herein for illustration purposes only. This is a conceptual layout that will be subject to detailed design. The property information for Option 1 is included in Table 2-12.

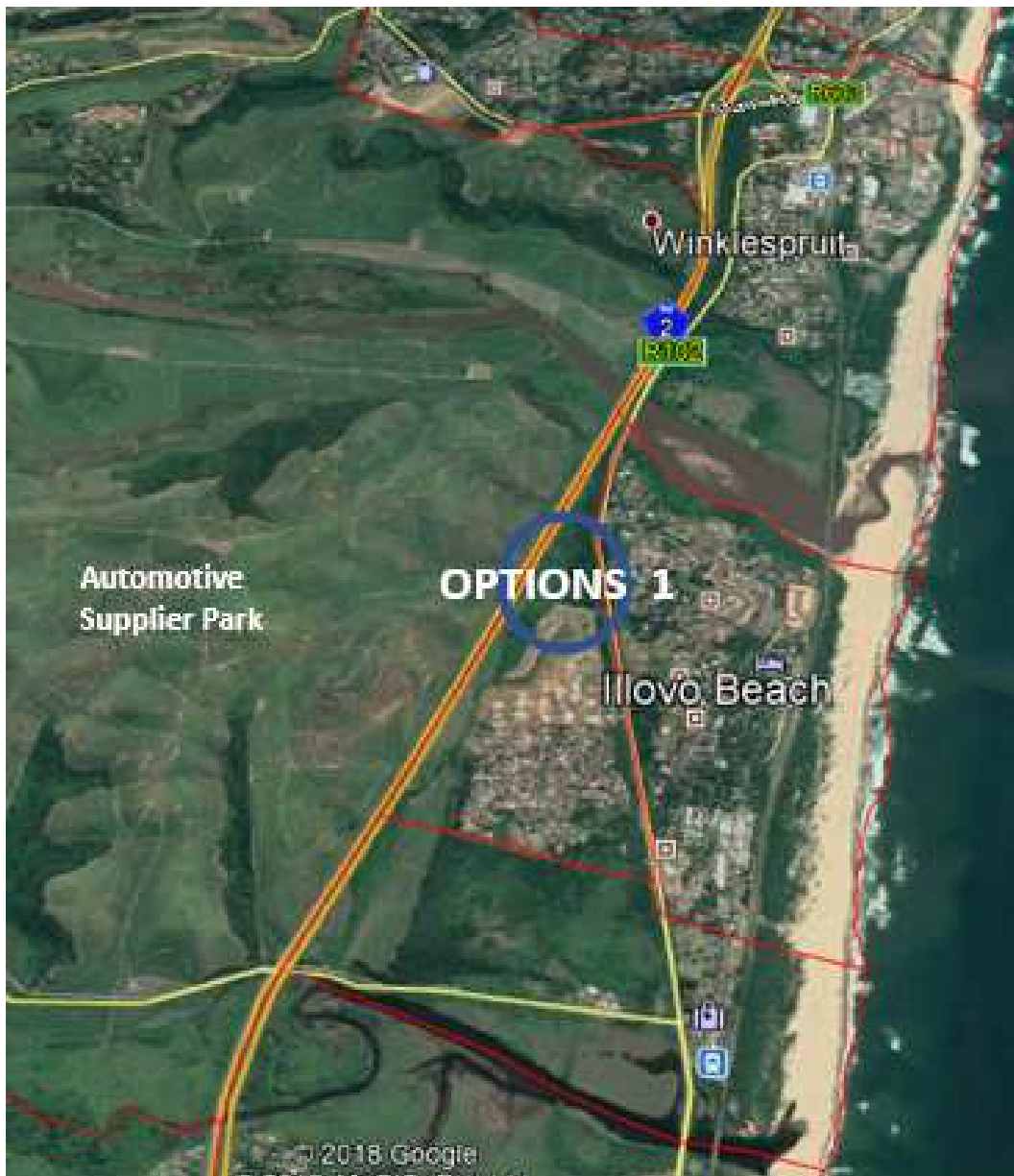


Figure 2-7: Location of Option 1 interchange (and its variations, Option 1c and Option 1d) route access



Figure 2-8: Option 1: New Narrow Diamond Interchange of the N2 with no link bridge to the R102

Table 2-12: Property Information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	97
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh
Property Description	Portion 1 of Erf 187, Kingsburgh Portion 6 of Erf 145, Kingsburgh Portion 1 of the Farm Nogi No. 9376 Portion 5 of Erf 141, Kingsburgh Portion 1 of Erf 140, Kingsburgh Remainder of Erf 140, Kingsburgh Portion 1 of Erf 137, Kingsburgh Portion 1 of Erf 188, Kingsburgh
SG Code	N0ET01630000018700001 N0ET01630000014500006 N0ET00000000937600001 N0ET01630000014100005 N0ET01630000014000001 N0ET01630000014000000 N0ET01630000013700001 N0ET01630000018800001

Option 1c

Option 1c is a variation of Option 1 in that the new narrow diamond interchange on the N2 will still be constructed, but with a new link road / elevated bridge from the R102 to the central boulevard on the KZN ASP site.

In this scenario, there will, therefore, be access from the R102 and the N2 via the newly constructed interchange to the site. Although it is anticipated that most of the regional vehicles travelling along the N2 will gain access to the KZN ASP site via this newly constructed interchange, some of the traffic will flow along the R102 and gain access to the site over the new link road / elevated bridge. The area where the new link road / elevated bridge connects with the R102 is close to the Larnaco development within a forested area. It is to be expected that the local traffic in the area from surrounding neighbourhoods will continue to gain access to the site via the R603, P578 and P197 routes.

The configuration of Option 1c is illustrated as per Figure 2-9 below and is included herein for illustration purposes only. This is a conceptual layout that will be subject to detailed design. The property details are provided in Table 2-13.



Figure 2-9: Option 1C: Narrow diamond interchange of the N2 with a new link to the R102

Table 2-13: Property Information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	109
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh,
Property Description	Portion 1 of Erf 187, Kingsburgh Portion 6 of Erf 145, Kingsburgh Portion 1 of the Farm Nogi No. 9376 Portion 5 of Erf 141, Kingsburgh Portion 1 of Erf 140, Kingsburgh Remainder of Erf 140, Kingsburgh Portion 1 of Erf 137, Kingsburgh Portion 1 of Erf 188, Kingsburgh Remainder of the Farm Nogi No. 17469 Remainder of Erf 138, Kingsburgh Portion 1 of Erf 138, Kingsburgh
SG Code	NOET01630000018700001 NOET01630000014500006 NOET00000000937600001 NOET01630000014100005 NOET01630000014000001 NOET01630000014000000 NOET01630000013700001 NOET01630000018800001 NOET00000001746900000 NOET01630000013800000 NOET01630000013800001

Option 1d

Option 1d is a scenario where there is no N2 interchange and access to the site will be via a new elevated bridge to be constructed from the R102 over the N2 to the central boulevard. This scenario will allow traffic to access the KZN ASP along the R102. The traffic to the site from the north is expected to take the off-ramp at the Kingsburgh Interchange and travel south along the R102, after having passed through the urban areas along the route. Traffic from the south is expected to exit the N2 at the Umnini Interchange and then travel north along the R102 to the site. The local traffic in the area will likely continue to gain access to the site via the R603, P578 and P197 routes.

The configuration of Option 1d is illustrated as per Figure 2-10 below and is included herein for illustration purposes only. This is a conceptual layout that will be subject to detailed design. The property details are provided in Table 2-14.



Figure 2-10: Option 1D: A new bridge from the R102 with no access off the N2

Table 2-14: Property Information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	109
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh,
Property Description	Portion 1 of the Farm Nogi No. 9376 Portion 1 of Erf 140, Kingsburgh Remainder of Erf 140, Kingsburgh Remainder of the Farm Nogi No. 17469 Remainder of Erf 138, Kingsburgh Portion 1 of Erf 138, Kingsburgh
SG Code	NOET00000000937600001 NOET01630000014000001 NOET01630000014000000 NOET00000001746900000 NOET01630000013800000 NOET01630000013800001

Option 3b

Option 3b a split interchange with half located in the same position as Options 1 and half located further to the south along the N2 as shown on the accompanying Figure 2-11.



Figure 2-11: Location of Option 3b in relation to Options 1

This option makes provision for entry to and exit from the KZN ASP site via a new half diamond interchange on the N2 north-bound carriageway, with direct entry to the boulevard from the south via an off-ramp and exit from the boulevard to the north via an on-ramp (in the same position as Option 1). Entry to the site from the north will be via a new loop ramp on the south-bound carriageway of the N2 positioned further to the south at the southern end of the south-eastern platform (P1). Exit to the south will be via the P197 only. No provision is made in this option to link the R102 directly to the site and hence there will be no flow of traffic along the R 102 as in Options 1c and 1d.

The configuration of Option 3b is illustrated as per Figure 2-12 and is included herein for illustration purposes only. This is a conceptual layout that will be subject to detailed design. The property information provided in Table 2-15.

Table 2-15: Property Information

Province	KwaZulu-Natal
Local Municipality	eThekweni Municipality
Ward number(s)	97
Nearest places / town(s)	Umgababa, Illovo, Panorama Park, Karridene, Winkelspruit, Astra Park, Kingsburgh
Property Description	Portion 1 of the Farm Nogi No. 9376 Portion 1 of Erf 140, Kingsburgh Remainder of Erf 140, Kingsburgh Remainder of the Farm Nogi No. 17469 Portion 3 of Erf 133, Kingsburgh Portion 1 of Erf 137, Kingsburgh Portion 5 of Erf 141, Kingsburgh Portion 6 of Erf 145, Kingsburgh Portion 1 of Erf 187, Kingsburgh Portion 1 of Erf 188, Kingsburgh
SG Code	N0ET0000000937600001 N0ET01630000014000001 N0ET01630000014000000 N0ET00000001746900000 N0ET01630000013300003 N0ET01630000013700001 N0ET01630000014100005 N0ET01630000014500006 N0ET01630000013700001 N0ET01630000018800001

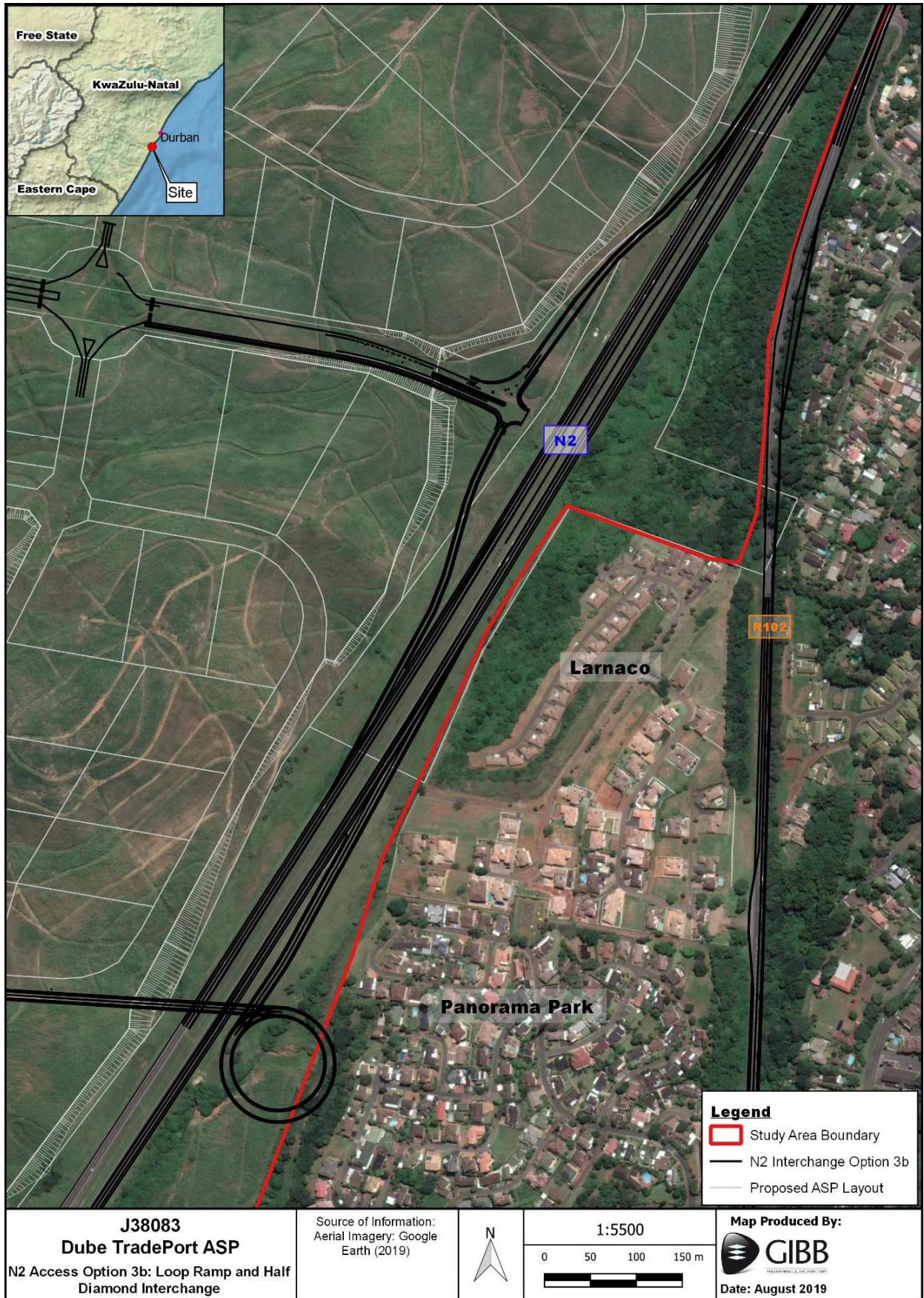


Figure 2-12: Option 3B Circular/ Clover Interchange of the N2

2.2 Surrounding land uses

To the north and to the east of the site for the KZN ASP development are the formal urban areas of Kingsburgh, Illovo South, Illovo Beach, and Panorama Park and Larnaco residential areas, with more dispersed, semi-rural dwellings and associated pockets of subsistence farming to the west and south. Natural areas, associated with the iLovu and uMsimbazi Rivers occur to the north and south of the property, respectively.

The existing Illovo Landfill site (55ha footprint) is a ‘General Waste Disposal Site’ that is located approximately 520m west of the site boundary. The property under consideration is located adjacent to, but outside the boundary of the landfill site’s designated 225ha buffer area. Refer to the location of the buffer area in Figure 2-13. This buffer area was established to ensure that development controls are in place on land located in the areas immediately surrounding the landfill site, in order to minimise impacts on surrounding land users, arising from the operational landfill site.

The site earmarked for the proposed KZN ASP, the preferred route of the 132kV transmission powerline and sewer line occurs within the Urban Development Line, as per the eThekweni Spatial Development Framework (SDF). Refer to the delineation of the eThekweni Urban Development Line (UDL) in the locality map in Figure 2-13.

The KZN EDTEA has not yet adopted the urban edge as developed by the eThekweni Municipality. However, a site visit was undertaken by GIBB and the KZN EDTEA on 4 September 2019, to determine if the site for development is situated within the edge of built-up areas. Subsequent to this site visit, written correspondence was received from Ms Natasha Brijlal of the KZN EDTEA that the site is perceived to fall within the urban edge. This decision was based on various factors, as follows:

- The site falls within the delineation of the City’s UDL;
- The site is abutted by a national freeway (N2) and existing development by approximately 50%;
- Services can be made readily available with pipelines being installed to connection points;
- The site falls out of the Estuarine Functional Zone (EFZ); and
- The site has been used for commercial farming for over 80 years.

The land uses surrounding the proposed KZN ASP site are described in Table 2-16 below.

Table 2-16: Surrounding land uses

Direction	Land Use and Distance
North	Cane lands (Adjacent)
	Astra Park residential area (1,5km)
Northeast	Winkelspruit residential area (670m)
	Kingsburgh residential area (2km)

East	Panorama Park residential area (120m) Illovo Beach (400m)
Southeast	The natural area associated with uMsimbazi River (300m)
South	Umnini residential area (500m)
Southwest	Umnini residential area (500m)
West	Canelands (Adjacent)
Northwest	Illovo South Village (1km)

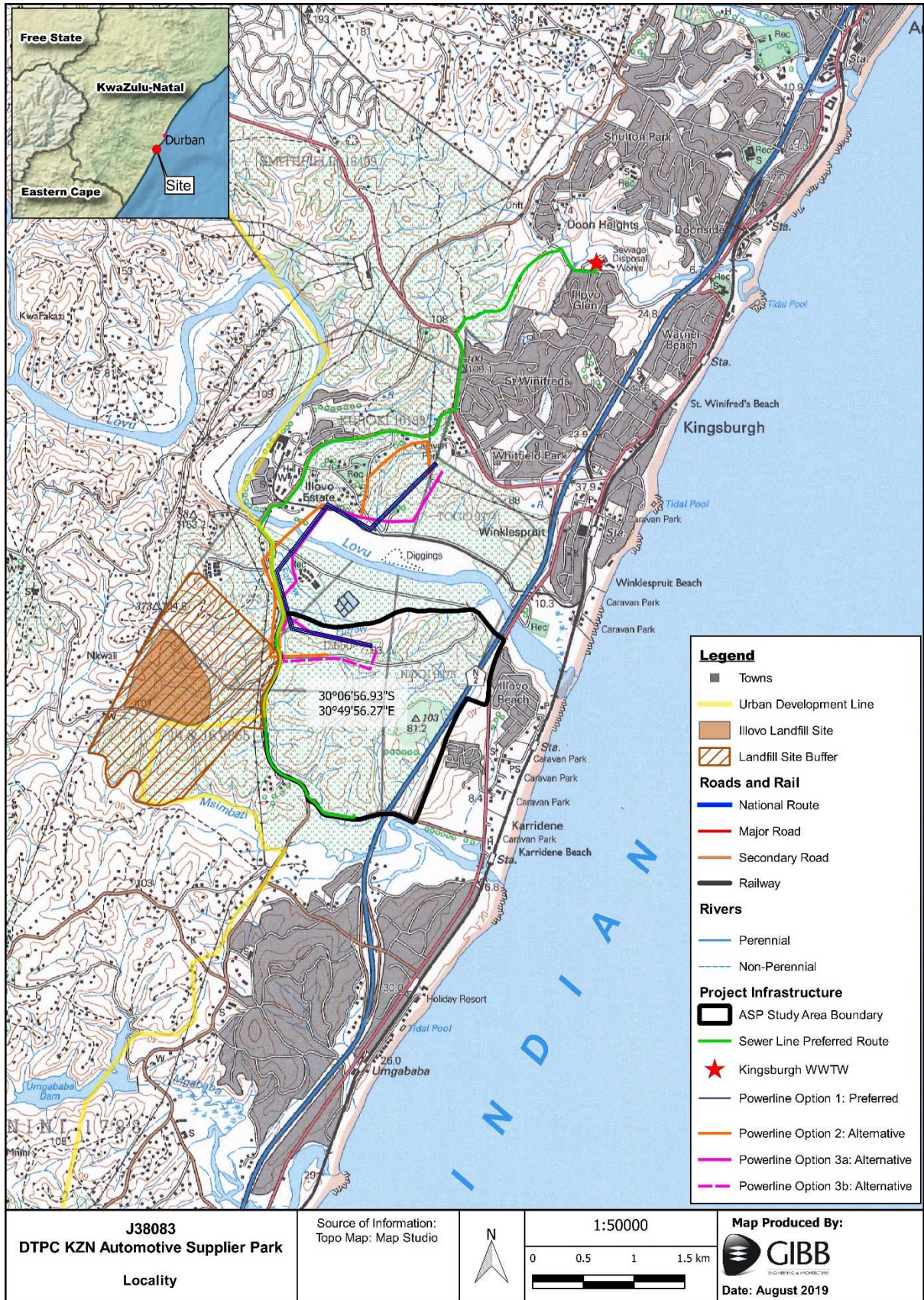


Figure 2-13: Locality Map for proposed KZN ASP, sewer line route and powerline routes

Table 2-17 provides a description of the land uses surrounding the proposed sewer line route alignment.

Table 2-17: Surrounding land uses along the length of the proposed sewer line from the proposed sewer pump station to the existing Kingsburgh WWTW

Land Use	Distance
Long Road	Adjacent (at start of the proposed sewer line route)
Msimbazi River	330m
Nsulwana rural residential area	875m
Mkwali rural residential area	1 330m
Illovo Industrial area	Adjacent
Illovo Village residential area	Adjacent
Astra Park residential area	Adjacent
Illovo North residential area	Adjacent
Shulton Park residential area	150m
Illovo Glen residential area	Adjacent

Table 2-18 provides a description of the land uses surrounding the proposed powerline route alignment.

Table 2-18: Surrounding land uses along the length of the proposed powerline routes (Option 1, 2 and 3a and 3b) from the existing Kingsburgh Substation to the proposed substation

Powerline Route Option 1

Land Use	Distance
Astra Park residential area	236m
Illovo North residential area	375m
Illovo Industrial area	114m
Mother of Peace Orphanage	200m
Nkwali rural area	1 200m
Cane-land	Adjacent
Panorama Park residential area	1 200m

Powerline Route Option 2

Land Use	Distance
Astra Park residential area	490m
Illovo North residential area	Adjacent
Illovo Industrial area	Adjacent
Mother of Peace Orphanage	200m
Nkwali rural area	895m
Cane-land	Adjacent
Panorama Park residential area	1 100m

Powerline Route Options 3a and 3b

Land Use	Distance
Astra Park residential area	330m
Illovo Village residential area	377m
Illovo Industrial area	Adjacent
Mother of Peace Orphanage	30m
Nkwali rural area	890m
Cane-land	Adjacent
Panorama Park residential area	953m

2.3 Solid Waste Management

2.3.1 Construction Phase

The solid waste generated on site during the construction phase will be stored in skips by the appointed contractor. An appointed waste contractor will thereafter remove the general waste to the closest licensed landfill site (Lovu Landfill Site). Small amounts of hazardous waste will be generated during the construction phase (e.g. oily rags, paint containers etc.); these will be disposed of in marked bins and removed to a licensed hazardous waste landfill for disposal.

2.3.2 Operational Phase

The development falls within the jurisdiction of eThekweni Municipality, and therefore Durban Solid Waste (DSW) will be responsible for the provision of waste collection services.

(a) Waste Management and Disposal

An inclusive and comprehensive Waste Management Plan must be developed incorporating all of the individually required plans from prospective tenants. The comprehensive solid waste management plan must include, but the content is not limited to, the following:

- Contribution areas within the development;
- Type of waste generation for the contribution areas;
- Estimation of waste streams identified and waste volumes; and
- Potential recyclable waste streams.

It must be a condition in the EA that the Waste Management Plan be compiled by the prospective tenants prior to commencement of their operational manufacturing activities.

2.4 Civil Engineering Services

2.4.1 Water Use

(a) Construction Phase

The appointed contractors will be responsible for the sustainable use of water for construction activities. No water will be abstracted from the estuary, rivers, wetlands or watercourses on and surrounding the site. Rather, a legal source of (preferably non-potable) surface water for construction purposes from an external source (offsite) must be sourced by the Contractor, prior to the commencement of works. The Contractor must ensure that water obtained during construction is from a licensed source. Proof of the source of water being licensed must be a requirement that the Contractor must adhere to.

(b) Operational Phase

The bulk water demands envisaged for the KZN ASP development are tabulated below.

Table 2-19: Envisaged bulk water demands for the KZN ASP development

Year of implementation (2022=year 0)	Phase	Summer water demand (mℓ/d)	Cumulative summer water demand (mℓ/d)
1-2 (2023)	1A	0.6	0.6
3-5 (2025)	1B	1.1	1.7
6-10 (2028)	1C	1.3	3.0
11-25 (2033)	1D	0.8	3.8

Umgeni Water / eThekweni Water & Sanitation will only permit supply into a reservoir and not directly to reticulation. Ultimately 9.5Mℓ of storage will be required to comply with the 48 hours supply standard and 4 hours fire storage required for the assumed medium fire risk for the KZN ASP.

The proposed Bulk Water Supply to the KZN ASP will be from the existing Lower Illovo 1 offtake from the existing South Coast Pipeline. This pipeline is currently fed from the Amanzimtoti Water Treatment Plant and runs alongside the P197 on the western boundary of the TEA. Umgeni Water can currently supply up to 2-3Mℓ/day to the KZN ASP from this offtake until 2024 when more water will become available on completion of the Lower uMkhomazi Bulk Water Supply Scheme.

2.4.2 Sanitation

(a) Construction Phase

Portable chemical toilets will be provided for construction workers. These toilets must be located outside of the 1:100 year flood line and more than 32m from the edge of the delineated wetlands.

(b) Operational Phase

The estimated sewage flows that are expected to be generated from the proposed KZN ASP are tabulated below.

Table 2-20: Estimated sewerage flows to be generated from the proposed KZN ASP

Year of implementation (2022=year 0)	Phase	Sewer Demand per Phase (Mℓ/d)	Cumulative Sewer Demand per Phase (Mℓ/d)
1-2 (2023)	1A	0.26	0.26
3-5 (2025)	1B	0.49	0.75
6-10 (2028)	1C	0.60	1.35
11-25 (2033)	1D	0.38	1.74

The above is based on the assumption that the average sewage flows are 85% of the average water demands.

The current proposal is to transfer the sewage to the Amanzimtoti Waste Water Treatment Plant which is reported to have spare treatment capacity of some 8Mℓ/d. The route of the proposed 400mm diameter sewage rising main will follow the existing P197 road. The proposed position for the rising main is generally 3m within the road reserve boundary, which will allow for possible future widening of the road. The highest elevation of the rising main is 98mamsl⁴ at chainage⁵ 6 950m (*the total length of the pipeline from the ASP to the vicinity of the Kingsburgh Wastewater Treatment Works is estimated to be 8 680m*). A proposed Pump Station south of the KZN ASP will lift sewage to a stilling chamber constructed at this point from where sewage will drain by gravity to the vicinity of the Kingsburgh Wastewater Treatment Works. The eThekweni Water and Sewage Department (EWS) has undertaken to provide information regarding the existing sewage network between the Kingsburgh and Amanzimtoti Wastewater Treatment Works to establish a suitable point to discharge the sewage in order for it to reach the Amanzimtoti Works.

2.5 Stormwater Management Plan

SRK Consulting (South Africa) (Pty) Ltd compiled the Stormwater Management Plan for the proposed KZN ASP development as per municipal requirements (Appendix E4). This was aimed at providing recommendations for mitigating any negative impacts the storm water run-off might have on downstream land and development, both during and after construction.

This implies that the future peak flows generated from the site must be attenuated back to pre-development peak flows and that the post-development flows cannot concentrate any more than would naturally occur.

⁴ Metres above mean sea level is a standard metric measurement in metres of vertical distance of a location, in reference to a historic mean sea level taken as a vertical datum.

⁵ Chainage refers to the distance from the start of the proposed sewer rising main.

2.5.1 Current Conditions (Pre-Development)

The uMsimbazi estuary is to the south of the proposed development (refer to Figure 2-3) and is rated as a class B+ estuary within the National Biodiversity Assessment (NBA) "11 Present Ecological State (PES) rating and A/B or Best Attainable State (BAS) for the Recommended Ecological Category (REC) and is the highest within the eThekweni Municipality. The conservation importance has a level 5 rating and the protection status is ranked as 1 (extremely important). The ecological importance rating for the uMsimbazi Estuary is 5 (extremely important). The classification of the water with regards to the salinity has a class A rating.

Due to the sensitivity mentioned above, the post-development flows generated from the proposed development, which discharges into the uMsimbazi estuary, cannot be increased. This is critical for the smaller flows, i.e. 1:5 and 1:10 year storm events.

2.5.2 Proposed Development (Post-development)

The proposed development is such that of the 242ha catchment which drains to the uMsimbazi River side of the development, 48% is to be developed i.e. 116 16 ha, while 11% i.e. 41.25 ha of the 375ha catchment which drains into the Illovo River, is to be developed.

The proposed development will generally be characterised by large developed platforms and road areas, and therefore, large portions of these sites will be completely hardened or impermeable, which is in contrast to the current barren site. This will result in an increase in peak flows which will require attenuation to bring the mean flow rate down to pre-development flows.

2.5.3 Attenuation

Attenuation was calculated for the 1:5, 1:10, 1:20 and the 1:50 year storm events, as per requirements from the eThekweni Municipalities and those of the estuarine specialists for this project who requested that the post-development flows for the 1:5 and 1:10 year storm events be attenuated back to pre-development flows.

2.5.4 Minor Attenuation

In order to limit the post-development peak flows to pre-development rates, retention facilities will be required. Maximum "on-site" retention will be implemented using parking areas on the developed sites. This will be attained by using a kerb along the low points of the sites and restricting the run-off generated through small outlets. The kerb height to be used bordering the proposed platform developments will be 250mm, which are of a height which would prevent flooding of vehicles. Should a storm event occur where the available attenuation will be exceeded, the excess run-off will flow over the kerb bordering the properties and will be directed into the road stormwater system. See Appendix E of the SWMP for a typical layout of an outlet system for each developed site – see drawing 541640/001 of Appendix E4.

2.5.5 Major Attenuation

The minor attenuation facilities on the developed sites are not sufficient to fulfil the attenuation requirements for the development, hence additional larger facilities will be required. The location of the major attenuation facilities would normally be in the nearby watercourses, however, due to environmental restrictions for this development, no attenuation facilities will be permitted in the watercourses. Due to this restriction, and due to the major attenuation required for this development, a total of ten proposed even related to the development will be required for attenuation.

The depth of the attenuation facilities was determined as the flooded depth of attenuated water for each storm event modelled (1:5 to 1:50 year). A freeboard⁶ of 300mm was added to the maximum depth as a factor of safety, hence the attenuation pond depth is the total of the maximum flooded depth and the freeboard depth of 300mm. An overflow system linking the attenuation facility and the nearby watercourse is also recommended should a storm event occur which the attenuation facility is unable to cater for.

Should a large storm occur (greater than 1:10), water will build up within the facility and will overflow through the open top manhole (the depth of manhole is at maximum flooded depth, see Table 7-10 of Appendix E4). This water will thereafter flow through a larger pipe (see Table 7-11, of Appendix E4 greater than 1:10 year storm event) to the adjacent watercourse. For storm events which are larger than what the facility can cope with, or should the outlet manhole become blocked, an overflow system has been designed which will cater for this water. Key findings from the study are described below:

- The cumulative peak flows for each storm event for post-development conditions (with retention) do not exceed those for pre-development conditions. This is for flows to the Illovo River and those to the uMsimbazi River; and
- This is supported by the hydrographs for the pre- and post-development peak flows with and without attenuation for locations at the iLovu and uMsimbazi Rivers for the 1:5, 1:10 and 1:50 year storm events.

⁶ The vertical distance between the crest of the overflow embankment and the water surface.

2.5.6 Recommendations

- Minor attenuation is required on the proposed site (drawing 541640/001 of Appendix E4);
- Major attenuation facilities are required at various locations on the proposed development site (drawing 541640/002 and Table 7-11 of Appendix E4);
- All potential “dirty” water areas are to be covered and bunded to prevent this water from contaminating the clean water from each developed site;
- The “dirty” water collected would need to be treated and disposed of to a system separate to the clean stormwater system;
- Erosion protection in the form of Reno mattress, Gabion baskets, stone pitching or rip-rap to be constructed at all storm water discharge points, including downstream and upstream of crossings and attenuation facilities including spillway. The Resident Engineer on site must confirm locality, extent and type of the erosion protection required; and
- Maintenance needs to be carried out on a continual basis to prevent blockage of the formalised pipe system.

2.6 Preliminary Electrical Design Report

GIBB (Pty) Ltd undertook the compilation of the Preliminary Electrical Design Report (Appendix E2). The findings of this study indicated that the phased demand of the completed area would require approximately 154MVA. The electrical system for the development is an 11kV 400V/230V three phase, 50 Hz 4 wire class 2 system with neutrals solidly earthed at the transformers.

The proposed Medium Voltage (MV) Network through the development site shall be a fully underground network. The take-off point will be from the proposed KZN ASP Substation. The MV cable routes are as indicated on the development plan J38083 Sheet 1 of Appendix E2. MV Cables are to be buried at a depth of 1200mm below final ground level.

Provision will be made for standard EThekwini Electricity (EE) 11kV/420V type B Mini-substations as per EE specification. It is envisaged that 11kV/420V 500kVA mini-substation will be utilised. The earthing shall be in accordance with NRS 004/ 034 and EThekwini Electricity specification. The earthing of the reticulation system will be achieved by creating earth mats around the mini-substation. Mini-substation locations are indicated on the development plan J38083 Sheets 1 of Appendix E2.

Light-Emitting Diode (LED) street light luminaires will be used for street lighting. LED lamps are to meet class B3/B4 road lighting standards (Low traffic volume residential road) as per SANS 10098-1. The luminaires shall be fitted with a 5A circuit breaker for isolation.

LED luminaires will also be utilised on main arterial routes in and out of the development site. Street lighting control shall be via a 3 core 2.5mm² PVC SWA cable installed from the nearest mini-substation to the nearest pole and connected via a photocell mounted at the pole for

each lighting circuit. The streetlight control gear shall be mounted inside the mini-substation in a designated street lighting compartment.

The proposed pylon structure required in terms of the Municipality standards for 132kV transmission lines is the double circuit twin ELM with pine earth. Refer to this type of pylon in Figure 2-14 below.

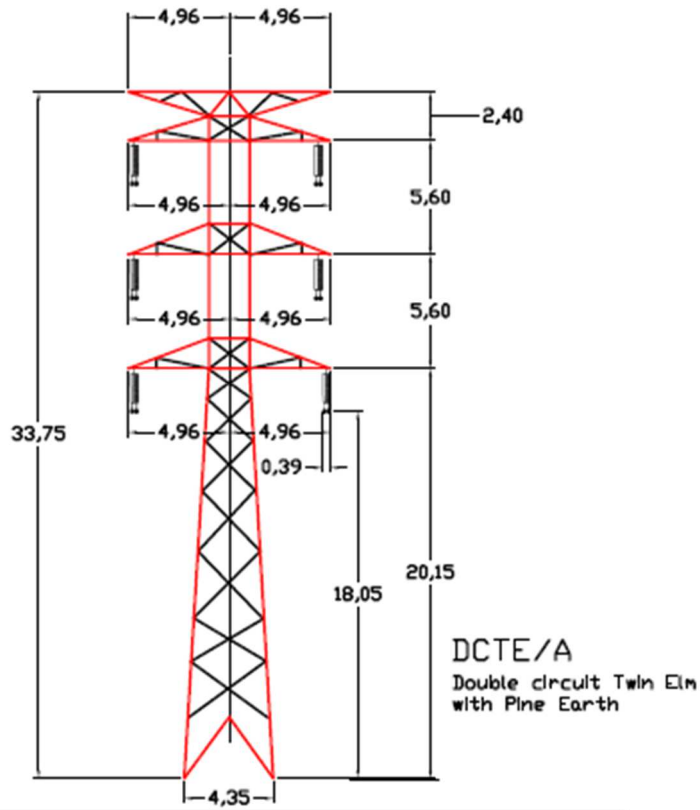


Figure 2-14: Design specification for double circuit twin ELM tower with pine earth

2.7 Emissions into the Atmosphere

2.7.1 Construction Phase

Dust and vehicle emissions will be generated during the construction phase as a result of vegetation clearance, excavation and the movement of trucks transporting construction material and other earthmoving machinery. The emissions will, however, be temporary in nature and will, therefore, have short-term impacts on the immediate surrounding areas. The authorisation of such emissions will therefore not be required.

2.7.2 Operational Phase

There are four main platforms related to the proposed development which will be constructed in a phased manner. The tenants and their prospective activities at the proposed automotive supplier park are unknown at this stage and can therefore not provide conclusive input into an Air Quality Assessment model for the operational phase of the development.

During the operational phase, there will be indirect impacts in the form of increased localised emissions from increased vehicular traffic. Should any of the activities at the proposed general industrial facility generate any noxious gas emissions, the responsible tenant must obtain an Environmental Authorisation (EA) from the Competent Authority, and an Air Emissions Licence (AEL) from the eThekweni Municipality prior to commencement of the operation/activity, including commissioning of an Air Quality Assessment, if required. In the event that an AEL is required, an Air Quality Assessment must be undertaken by a prospective tenant prior to occupation on the site. It is recommended by the EAP that this requirement be made a condition in the Environmental Authorisation (EA).

2.7.3 Air Quality Impact Assessment

An Air Quality Specialist Report for the proposed road access options for the proposed KZN ASP was undertaken by Airshed Planning Professionals (see Appendix D1). The report aimed at determining potential health impacts as a result of road layouts and interchange alternatives.

The process which was followed to simulate the impact of the proposed road alternatives on air quality required the development of an emissions inventory of the various air pollutants followed by the atmospheric dispersion modelling of these emissions.

An emissions inventory is based in the application of emission factors (e.g. gram pollutant per kilometre per vehicle) developed for various vehicle and fuel types, vehicle speeds and road slopes. Emission factors apply to exhaust emissions, and evaporative emissions (e.g. petrol tank). Emission factors for tailpipe exhaust emission were developed for the South African fleet and fuel specifications representative after 1996. All vehicles were assumed to comply with Euro V emission standards. These standards apply to European vehicles manufactured, prior to 2015.

A very comprehensive set of emission rate factors was developed by the European Environment Agency. The methodology for the emissions inventory covers regulated exhaust emissions of carbon monoxide, oxides of nitrogen, sulphur dioxide, particulate matter, volatile organic compounds (VOC) and lead, in addition to several other unregulated compounds.

Air Quality Sensitive Receptors (AQSR) located within the 'modelled area' includes residential settlements, hospitals, clinics and, schools. A total of 46 AQSRs were identified and included in the dispersion simulations (see Table 5 of Appendix D1) including nine receptors within 3 km of the proposed KZN ASP. The nearest sensitive receptor to the KZN ASP is Panorama Park, a residential area to the east of the N2. Some of the residences in Panorama Park are situated within 100 m of the N2 highway and the boundary of the ASP (Figure 2-14).

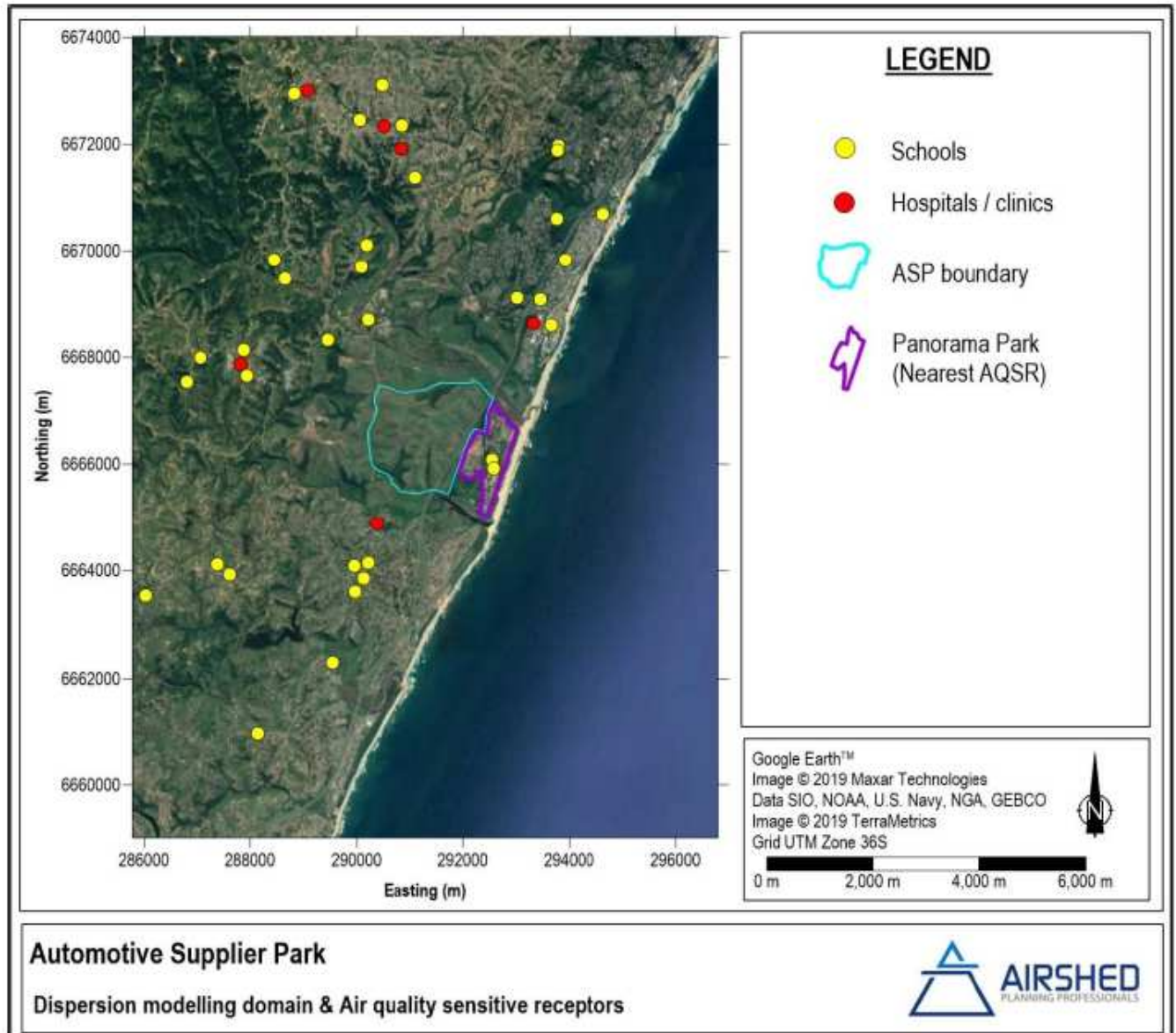


Figure 2-15: AQSRs surrounding the Project area

Emissions were calculated based on the combination of vehicle types and volumes of traffic in the year 2040, as this is the year of KZN ASP operation is assumed to have the largest traffic volumes. Total air emissions were calculated for the five route alternatives (*Option 0, 1, 1c, 1d and 3b*) to compare total air pollution emissions. In addition, concentration transects were calculated that illustrate the air concentration of a pollutant at increasing perpendicular distances away from the road edge, along the most impacted road sections.

These emission factors also accommodate the dependence on vehicle types, engine types, fuel specification and vehicle speed. The key findings of this study are described below:

- Ground-level impacts due to all simulated pollutants (including PM₁₀, PM_{2.5}, NO₂, SO₂, CO, Benzene and non-methane volatile organic compounds (NMVOC's)) did not exceed their respective hourly, daily or annual standard or guideline at any of the road segment;

- Ground Level Concentrations (GLC's) for SO₂, CO, Benzene and NMVOCs were very low and contribution to ambient levels are expected to be minimal; while GLCs due to PM₁₀, PM_{2.5} and NO₂ were moderate and may contribute notably to ambient levels in the immediate area;
- Excess lifetime cancer risk due to diesel particulate matter at 100 m from the centre of the road was slightly more than 1 in 10 000 and is considered "moderate risk" (for all scenarios); while at 250 m from the middle of the road, excess lifetime cancer risk was less than 1 in 10 000 and is considered "low risk" This is true of all scenarios except Option 0 (afternoon), which retained its "moderate risk" classification (the classification only drops to "low risk" at 270m away from the middle of the road);
- All scenarios and route options assessed in this study were ranked based on simulated ground-level impacts as well as excess lifetime cancer risk. The ranking indicates that Option 1D, Option 1 and Option 1C have lower air quality impacts (in that order), while Option 3B and Option 0 have the highest impacts on air quality; and
- In general, the morning scenarios presented lower impacts than the afternoon scenarios across all route options considered in this study.

2.8 Generation of Noise

An Environmental Noise Study was undertaken by JH Consulting (Appendix D2). The purpose of the investigation was to estimate any potential noise impact of the proposed KZN ASP project on the existing ambient noise climate in the surrounding area, and separately the effect of each of the five proposed access routes/interchange designs to the site for the development.

2.8.1 Construction Phase

Noise will result from the movement of vehicles, trucks and other associated machinery used during the construction phase. However, the noise associated with construction activities will be of short term, localised and will only last during the construction phase of the project.

Construction activities associated with the new infrastructure are unlikely to increase the noise level by more than that anticipated for the operational phase. Construction is likely to span a relatively short time period compared to the operational phase, but its duration is currently unpredictable, as a number of independent companies are likely to develop the sites along with their own time frames.

Construction of the full development is expected over a duration of 13 years. Construction is will take place in phases and Phase 1A is anticipated to commence in August 2021. Operation of Phase 1A is expected to commence in 2023. Phase 1B in 2025. Phase 1C in 2028. Phase 1D in 2033. [*Paragraph also inserted into section 2.1.1.*]

2.8.2 Operational Phase

The site is currently dominated by the natural sounds of rustling sugar cane, wildlife, and man-influenced sounds such as livestock, farming activities, and regular traffic from local roads, including a high proportion of Heavy Goods Vehicles (HGV's) delivering to the landfill site to

the northwest of the site and the N2 highway to the east. Therefore, it is to be expected that noise from the proposed site and the necessary transport to and from the site, could potentially have an impact on the surrounding area.

2.8.3 Methodology

In order to be able to assess both the quantitative and geographical extent of the potential impact, baseline data in the form of existing ambient noise levels at the site were taken by the Acoustic Specialist. These results were compared to the predicted noise levels generated at the site. The extent of the community⁷ response was assessed according to relevant national and international standards which take into account sociological factors as well as the estimated change in noise climate.

As potential tenants and their operations are not known at this stage, the approach used in this assessment was to utilise the SANS recommended limit levels for industrial sites, which is the worst-case scenario, if the industrial area is to meet current environmental noise emission standards.

The existing ambient noise levels were measured over sampling periods of ten minutes for representative time periods during typical weekdays. Six (6) measurement positions (day time from 06h00 to 22h00) and (night time from 22h00 to 06h00) on and near the proposed site boundaries were chosen as representative of the area and its activities. At all measurement positions, observations of the nature of the contributions to the ambient noise and identifiable noise events were noted.



Figure 2-16: Distances of the selected sensitive receptors from the proposed KZN ASP site boundary

⁷ "Community" is the term used in most environmental assessment procedures to refer to that group of people, residential areas, businesses, or public entities (schools, hospitals etc.) that will, could, or may be impacted by pollution from the project, be it noise, air quality, visual impact, etc.

The noise measurement equipment used in the assessment included 01dB Type SdB01+ Precision Integrating Sound Level Meter, serial number 10180, fitted with 01dB Microphone Type MCE210, serial number 001194, and windscreen. Field calibration using Bruel and Kjaer Type 4230 Sound Level Calibrator, serial number 522170. All equipment with valid calibration certificates were obtained from M and N Acoustic Services (Pty) Ltd.

Noise measurements were carried out in accordance with SOUTH AFRICAN STANDARD - Code of practice, SANS 10103:2008, Third revision, *The measurement and rating of environmental noise with respect to annoyance and to speech communication*, and as required by the regulations of the DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM. NO. R. 154. Noise Control Regulations in Terms of Section 25 of the Environmental Conservation Act, 1989 (Act No. 73 of 1989). Govt. Gaz. No. 13717, 10 January 1992.

The worst-case scenario was considered, i.e. that 1) the noise level expected at the boundary of the industrial zone is the highest recommended by current noise regulations, 70dB(A) during daytime and 60dB(A) during night-time), or road, predicted at the Sensitive Receptor under consideration, that 2) there is direct line of sight to that site boundary, and that 3) there is continuous noise from the noise source for both daytime and night-time.

2.8.4 Findings

The noise impact was quantified as the predicted increase in ambient noise level, in decibels, which can be attributed to the proposed township development and road changes, appropriate to the proposed operating times and days.

Existing noise sources included the following:

- Natural sounds of the bush;
- Livestock and agricultural activity on surrounding land;
- Noise from the N2 Highway; and
- Noise from surrounding local roads.

2.8.5 Predicted Impact of Proposed ASP Operation Noise

Noise levels at the nearest Sensitive Receptors (SR) to the proposed KZN ASP were calculated. These are represented by SR1 to SR6. It is assumed that operations will take place continuously, day and night at the ASP. The sensitive receptors are exposed to a noise impact rated as NONE to LOW during the day or night, as shown in Table 2-21 below.

Table 2-21: Noise Impact for the defined SRs, for daytime and night-time exposure

SR No.	Co-ordinates	Distance (m)	Day	Night
SR 1	S30°06'14.06", E30°49'40.92"	620	Very Low	Very Low
SR 2	S30°06'13.37", E30°51'06.81"	900	None	None
SR 3	S30°06'41.61", E30°50'46.13"	310m	None	None
SR 4	S30°07'00.51", E30°50'30.14"	210m	None	None
SR 5	S30°07'39.89", E30°49'33.99"	750m	None	None
SR 6	S30°07'15.63", E30°49'28.18"	340m	Low	Low

2.8.6 Predicted Impact of Noise from the Proposed Site Access Options

Noise levels at the nearest Sensitive Receptors to the five interchange options have been predicted, assuming the peak hour traffic flows supplied will be the worst case of traffic entering and exiting the ASP area. It is noted that these peak traffic flows are significantly greater than the current existing (measured) peak traffic flows on the N2 itself and that the existing roads will not necessarily be able to carry such large traffic flows without significant upgrading. The worst-case Sensitive Receptors for each of the five proposed intersection designs are summarised in the table below and shown in detail on the maps (Figure 2-17 to Figure 2-21).

Table 2-22. Noise Impact for defined SRs, for peak-hour exposure along each access option

SR No.	Co-ordinates	Distance (m)	dB(A)	Peak Hour
Option 0	The entire length of the route	15	75	Very High
Option1-SR1	S30°06'52.20", E30°50'37.11"	80	68	Moderate
Option1c-SR1	S30°06'52.21", E30°50'37.05"	80	68	Moderate
Option1c-SR2	S30°06'50.92", E30°50'42.27"	35	71	High
Option1d-SR1	S30°06'50.93", E30°50'42.23"	35	71	High
Option1d-SR2	S30°06'41.61", E30°50'46.13"	22	73	Very High
Option3b-SR1	S30°07'09.65", E30°50'27.67"	30	72	Very High

Peak hours: 06:00 to 09:00 and 15:00 to 18:00

(a) Option 0 Access



Figure 2-17: Option 0 Access

Option 0 gives access to the western boundary of the KZN ASP via the existing Umgababa interchange (P578) enabling access via on-ramps and off-ramps in both northern and southern directions to existing roads, the Mnini Road and R197. All dwellings along this route are considered Sensitive Receptors. They are all placed 10-15 meters from the road centre-line. There will be no road upgrades and the status quo of the existing road network will prevail.

However, these two-lane country roads are both very narrow and there are adjacent buildings within 15m of the centre-line of the road.

(b) Option 1 Interchange Design

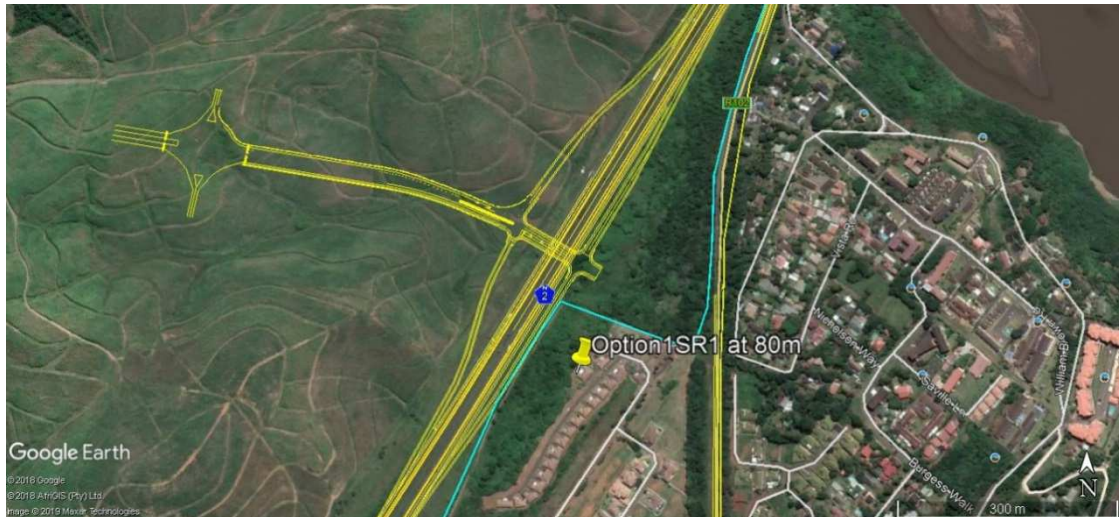


Figure 2-18: Distances of the Sensitive Receptor from the Option 1 Interchange Design

The Option 1 interchange design gives access to the eastern boundary of the proposed ASP via a new interchange, enabling access via on-ramps and off-ramp directly beside the existing N2 in both northern and southern directions to a new spine road (central boulevard). The nearest Sensitive Receptor (labelled Option1SR1) is 80m (meters) from the centre line of the nearest carriageway. The projected rise in noise levels in the adjacent residential area of Panorama Park is due to a combination of the reduced distance of the nearest sensitive receptors to the southern-going on- and off- ramps and the doubling of the peak hour traffic flow.

(c) Option 1c Interchange Option

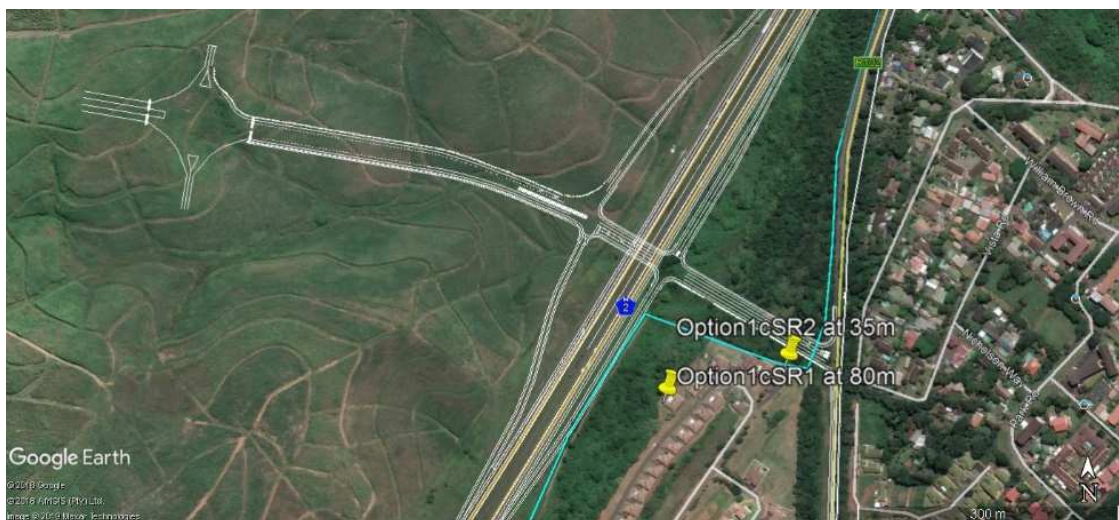


Figure 2-19. Distances of the Sensitive Receptors from the Option 1c Interchange Design

Option 1c gives access to the eastern boundary of the proposed ASP via a new interchange, enabling access via on-ramps and off-ramps beside the existing N2 in both northern and southern directions to a new spine road (central boulevard) and also via a new elevated link road to the existing R102. The nearest Sensitive Receptor (labelled Option1cSR2) is 35m (meters) from the centre line of the link road to the R102. The nearest Sensitive Receptor to the N2 (labelled Option1cSR1) is 80m (meters) from the centre line of the nearest carriageway of the N2. The projected rise in noise levels in the northern part of the adjacent residential area of Larnaco Residential is due to a combination of the reduced distance of the nearest sensitive receptors to the southern-going on- and off- ramps and the doubling of the peak hour traffic flow on the N2. It has been assumed that the majority of the peak hour traffic will use the N2 highway leaving the link to the R102 to provide a secondary access route for local or overflow traffic comprising an assumed 10% of the total traffic flow into the proposed ASP.

(d) Option 1d Interchange Option

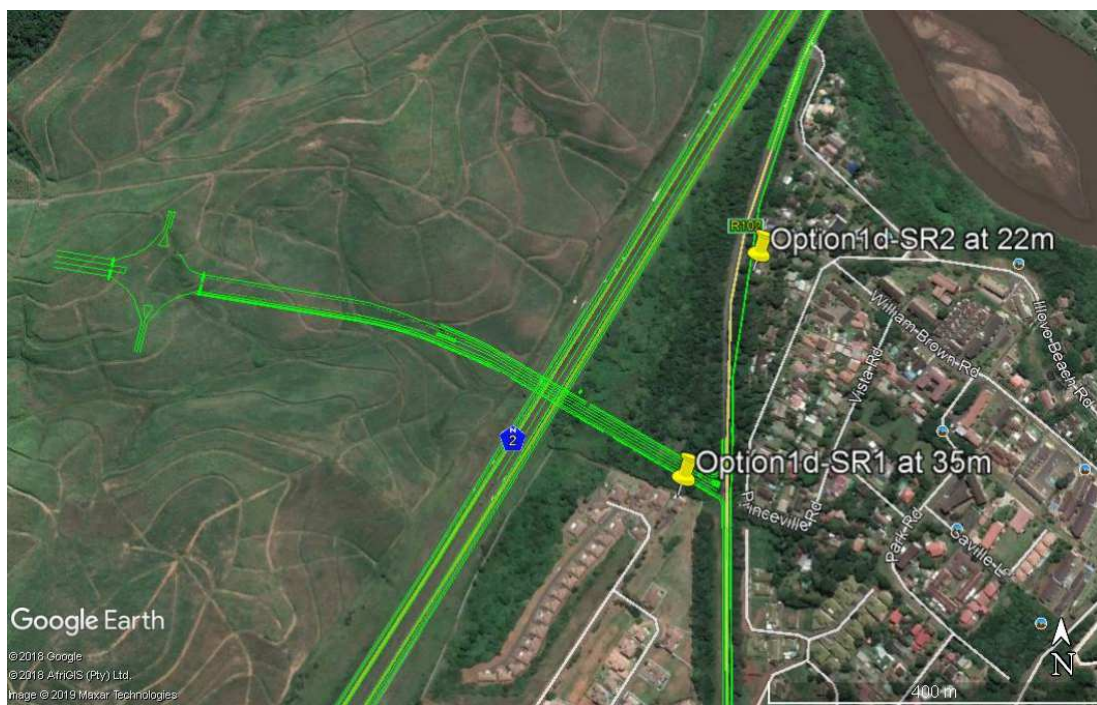


Figure 2-20. Distances of the Sensitive Receptors from the Option 1d Interchange Design

The Option 1d interchange design gives access to the eastern boundary of the proposed ASP via a new elevated link road to the existing R102, and a bridge over the N2, without any direct access to the N2. The nearest Sensitive Receptor (labelled Option1dSR2) is only 22m (metres) from the centre line of the R102. The nearest Sensitive Receptor (labelled Option1dSR1) is 35m (metres) from the centre line of the link road to the R102. Noise levels from the N2 will remain substantially unchanged whereas those at the north of the adjacent residential area of Larnaco residential development will be significant. The absence of a link to the N2 means that all the peak hour traffic to the proposed ASP will use the link to the R102, leading to a very high noise level at all positions along this road.

(e) Option 3b Interchange Option

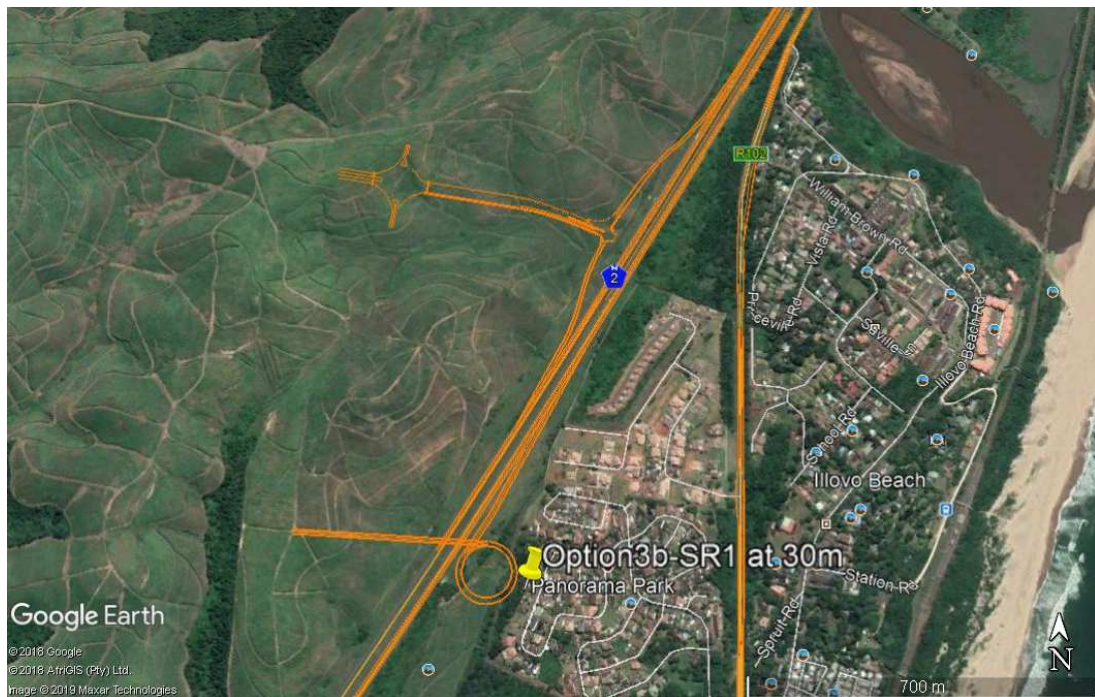


Figure 2-21. The distance of the Sensitive Receptor from the Option 3b Interchange Design

The Option 3b interchange design gives access to the eastern boundary of the proposed ASP via a new interchange, enabling access via on-ramps and off-ramps beside the existing N2 in the northern direction only. South-going access to the ASP is via a new off-ramp and elevated bridge over the N2. There is no south-going on-ramp to the N2 planned. The nearest Sensitive Receptor (labelled Option3b-SR1) is 30m (meters) from the centre line of the loop to the ASP. The projected rise in noise levels in the southern part of the adjacent residential area of Panorama Park is due to a combination of the reduced distance of the nearest sensitive receptors to this south-going off-ramp and the doubling of the peak hour traffic flow on the N2.

2.9 Need and Desirability of Proposed Development

The main objective of the proposed KZN ASP is to support Toyota SA Motors, who is the only (Original Equipment Manufacturer) OEM based in KZN, and to further attract other OEMs to the region. This would unlock investment opportunities, provide sustainable jobs and advance the OEMs growth trajectory in KZN.

The site earmarked for the proposed KZN ASP is located in Illovo South. Due to the availability of land as well as its strategic location, Illovo South is being viewed as an area that holds the potential to contribute to industrial / manufacturing and retail opportunities (Black Balance Projects, 2014). The eThekweni South area is advantageous in terms of the location of the proposed KZN ASP at Illovo, as automotive manufacturing currently occurs at Prospecton, with a relatively dominant advantage in the Transport equipment sub-sector. Toyota SA Motors' presence in the eThekweni South region is likely to be the key driver of the comparative

advantage, with many of its supply chain role-players also located in this region to take advantage of this.

The development site is referred to as District 4 in the Illovo South Local Area Plan (ISLAP). As per the ISLAP, District 4 is the primary manufacturing hub. The development and land use proposals for District 4 are based on the requirements of the KZN ASP.

In terms of the eThekweni Municipality, Spatial Development Framework (SDF) (2018 – 2019), the site earmarked for the proposed development is located in an area earmarked for industrial development. Refer to Figure 2-22 which provides an illustration of the location of the site and its future allocation for industrial development.

The SDF is an integral component of the Integrated Development Plan (IDP) and a key spatial transformation tool which guides how the implementation of the IDP should occur in space. The SDF, therefore, guides the desirable spatial distribution of land uses within a Municipality in order to give effect not only to the spatial vision, goals and objectives of the Municipality but by directing where the city should intervene in space to achieve its transformational objective. This is achieved through the identification of metro-wide spatial priorities and spatially targeting interventions in these key areas. The SDF is also aligned with provincial and municipal sector plans and strategies as a way of ensuring that the desired spatial form and outcomes of the Municipality are achieved both horizontally and vertically (eThekweni Municipality, 2018).

The SDF (2018, p. 164) specifically notes that the City has a number of priorities that it will pursue, most of which align with national government's focus on infrastructure development and job creation, and that this includes "the development of a logistics park in Illovo to support the automotive sector".

The SDF map shows the Need and Desirability of the Proposed Development in the Context of the Preferred Location.



Figure 2-22: Spatial Development Framework (SDF) demarcation for the site

Furthermore, the SDF (2018, p. 332) identifies Strategic Investment Areas to help prioritise and guide development initiatives to be located in areas where the greatest impact and positive spin-offs from a city-wide scale can be achieved.

Illovo is identified in the SDF (2018, p. 332) as such a Strategic Investment Area and it notes that “The Port expansion plans, the Back of Port Plan, the Dedicated Freight Route and the Automotive Supply Park (ASP) are all integral elements of Strategic Infrastructure Project (SIP2) and will be crucial to the economy of eThekweni and the Province”.

2.9.1 The Manufacturing Sector in South Africa

The manufacturing sector is considered to be a key sector for delivering the economic growth required to tackle the triple challenge of poverty, inequality and unemployment, with the automotive industry viewed as having a significant role to play, both as employer and stimulator of economic development. Cluster development is viewed as an imperative to enhance the country’s global competitiveness, with a supportive macroeconomic environment of appropriate tariffs and incentive schemes in core industries necessary to enhance competitive and comparative advantages and thereby positively impact the country’s trade balance.

Clustering is also seen as the geographical concentration of related economic activities, in order to create economies of scale that provide benefits such as access to shared resources, larger customer bases and other suppliers, which might result in higher productivity and efficiency of business activities.

Clustering in the automotive industry is further viewed as pivotal to promoting the competitiveness of the industry, as this approach facilitates the establishment of economies of scale. This allows South African OEMs and their suppliers to compete with foreign suppliers that have much greater economies of scale in locations in Western Europe, Asia and the United States.

In terms of sectoral focus, the Industrial Policy Action Plan, 2017/18-2019/20 (IPAP) views the automotive sector as a key industry for driving manufacturing output and narrowing the country’s trade deficit.

In recent times, the relationship between OEMs and their suppliers has also changed considerably, with OEMs pushing much of their pre-assembly work out of their plants and favouring an outsourcing model, with individual suppliers each focusing on their core competency. The concept of Just-in-Time (JIT) has become a critical manufacturing process strategy as it reduces OEMs’ need for stockpiling of components, thus freeing up valuable factory space for productive activities.

“In many instances this has led to the fostering of relationships between supply chain partners which supports increased levels of outsourcing and modular production combined with JIT deliveries, ultimately leading to an increased demand for logistical coordination of

manufacturing processes. In light of this, the supplier park concept allows the concentration of dedicated production, assembly, sequencing and warehousing facilities managed by suppliers or a third party in a single location or at least within close proximity to OEMs in order to achieve synergies. It has the potential to improve the production environment and services, lower costs and take advantage of the latest advances and practices in the automotive manufacturing chain” (Nieuwoudt, 2014).

As automotive sales are a growing source of government revenue, governments in all major countries have become active automotive industry stakeholders. Their regulations on the usage of resources and environmental policies will have a strong impact on a country’s automotive industry in the years to come. The SA government has played a definite role in the development of the domestic automotive industry through programmes such as the Motor Industry Development Programme (MIDP), the Automotive Production and Development Programme (APDP).

The Automotive Production and Development Programme (APDP) is a programme set up by the national government to assist in reaching the goal of the South African automotive industry of producing 1.2 million vehicles by 2020. This is to be achieved through creating an environment that will enable registered light motor vehicle manufacturers to significantly grow production values, and component manufacturers to significantly grow value addition, with the main objective of creating new sustainable employment opportunities across the automotive value chain and enhancing the trade balance of SA.

The proposed development will, therefore, present an opportunity for the clustering of automotive manufacturing industries in the region, thereby facilitating the potential for the manufacturing sector to deliver economic growth. The automotive industry is seen as having a significant role to play, both as employer and stimulator of economic development. Overall, the proposed KZN ASP and associated land-use present opportunities for the surrounding community in terms of economic development, social investment and physical sustainability.

2.10 Feasible and Reasonable Alternatives

In terms of the EIA Regulations, 2014 (as amended), consideration needs to be given to all possible alternatives. The assessment of alternatives allows different approaches and ways of meeting the need, purpose and objectives of a proposed activity to be explored, allowing for the identification and selection of the best practicable environmental option for implementation. Alternatives for consideration may include location or route alternatives, site alternatives, design/layout alternatives, activity alternatives and process or technology alternatives, etc.

2.10.1 Location Alternatives

There are no site alternatives as the Applicant purchased the property earmarked for the KZN ASP, specifically for the proposed development of the KZN Automotive Supplier Park and its associated uses. The applicant considers the site included in this Application for Environmental Authorisation as the most suitable for the proposed development, as it is

strategically located between automotive-related manufacturing industries in Prospecton and associated facilities being planned at Illovo, which is 17km from the site. There are also no other vacant properties of the size required for the proposed KZN ASP within the eThekweni Municipality.

Toyota Production System (TPS) has a production line for JIT manufacturing, also known as just-in-time production, which is aimed at primarily at reducing times within the production system, as well as response times from suppliers and to customers. Therefore, the site is strategically located in relation to Toyota's manufacturing plant in Prospecton, thereby maximising on the JIT delivery of automotive goods.

2.10.2 Activity Alternatives

(a) Proposed ASP (incorporating industrial land uses)

According to the Illovo South Local Area Plan (ISLAP), 2014, the site is referred to as District 4 in the ISLAP and is earmarked as an industrial/ manufacturing zone, with a specific mention of the KZN ASP and supporting service industries. Therefore, the proposed KZN ASP (incorporating industrial development) is compatible with the ISLAP. Given the influx of people from rural areas to the south of the city, the eThekweni SDF and the ISLAP has considered the area for industrial development as a needed economic generator in the south.

(b) Sugar Cane Cultivation

The current activity on site is commercial sugar cane cultivation, operated under Illovo Sugar. According to the findings of the Agricultural Impact Assessment (Appendix D3), there are no high yield potential arable soils at the site earmarked for the proposed development, and the fact that sugar cane is an industrial crop with a poor level of employment per hectare, there is no apparent reason why favourable consideration should not be given to alternate usages of the remaining few hundred hectares. This will generate, amongst other benefits, a higher employment rate per hectare of land. Permanent employment is the most widespread provider of food security (Msanzi Agriculture, 2018).

Taking a long term view, it is therefore imperative that alternative incomes be found for those currently dependent on the sugar cane industry for their livelihoods. As an alternative to sugar cane cultivation on site, activities such as industrial development will create jobs in the region.

2.10.3 Sewer Rising Main Route Alternatives

Two sewer rising main route alignments were originally investigated i.e. Option 1 and Option 2 (refer to Figure 2-23 for the Locality Map of the two options).

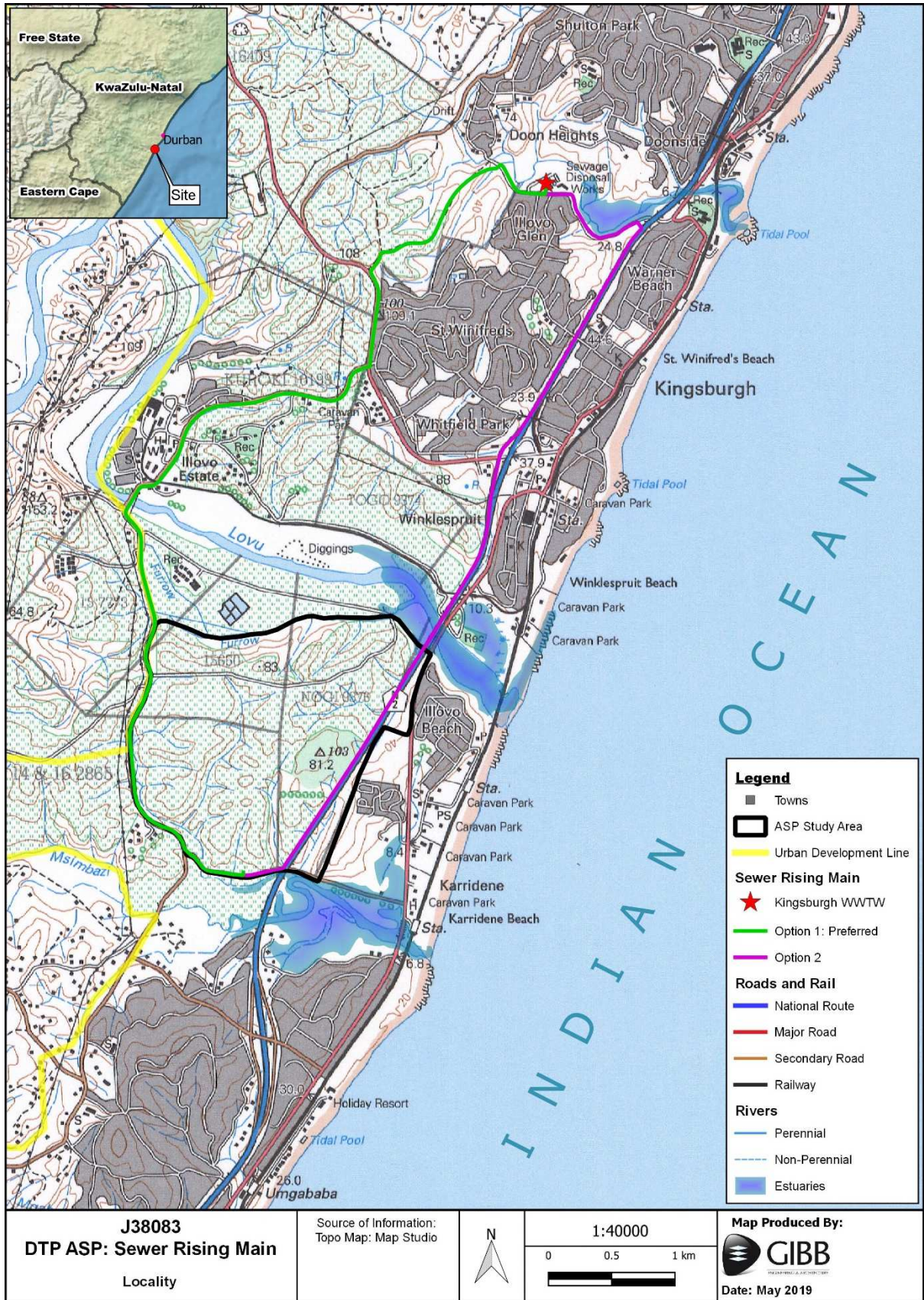


Figure 2-23: Locality Map of Alternative 1 and 2 sewer rising main options

Sewer rising main route Option 1, which will be routed along the western boundary of the KZN ASP site, occurs adjacent to the road reserve of the P197 and R603, and along the municipal road (Santo Alberto Road) and Longacres Drive to the existing Kingsburgh Wastewater Treatment Works (WWTW).

Sewer rising main route Option 2 is a route that follows the road reserve of the existing N2 along the eastern boundary of the site. This route alignment is not a feasible route alignment as it would require a new pipe bridge to be constructed within the iLovu River (*which is an estuary at the proposed crossing point*). Furthermore, there are other road upgrades envisaged along the N2 including road widening and new interchanges to provide access to the site. Option 2 was therefore deemed to not be a feasible and reasonable alternative. This Option will not be assessed further in this report

2.10.4 Proposed 132kV transmission powerline route alternatives

As indicated in Section 2.1.1, there are three alternative powerline route alignments that were considered for the proposed development. Alternative route Option 1 was selected in consultation with eThekweni Electricity and is the preferred alternative. The Applicant, the DTPC will be responsible for the construction of the proposed powerline (*in accordance with eThekweni Electricity (EE) specifications*) after which it will be handed over to the Municipality for operation and maintenance.

During the consultation with eThekweni Electricity, key factors in selecting the most technically feasible powerline route alignment were as follows:

- Pylons must be located out of the 1:100 year flood line;
- Crossing of the proposed powerline by the existing 132kV powerlines must be avoided;
- The pylons should ideally be located close to existing roads for accessibility during construction and operational phases (for maintenance);
- Property ownership over which the proposed powerline traverses should ideally be owned by DTPC, as a servitude would need to be registered for the proposed powerline corridor;
- Powerline routes should be kept as straight as possible (to avoid too many bends);
- Road crossings are allowed, but conductors should be at least 35m from the existing main roads (i.e. P197); and
- Proposed powerlines should not traverse fixed structures.

The locality map in Error! Reference source not found. shows the location of the different alternatives and Error! Reference source not found. describes the advantages and disadvantages in more detail.

- ✓ Indicates Advantage
- ✗ Indicates Disadvantage

Table 2-23: Comparative assessment of the technical considerations of the three powerline route alignments

	Option 1 (Preferred Route Alignment)	Option 2	Option 3a	Option 3b
Technical Considerations	<ul style="list-style-type: none"> ✓ No proposed pylons occur within the 1:100 year flood lines. ✓ Does not cross existing 132kV powerlines. ✓ Proposed pylons occur in close proximity to existing roads, thereby optimizing accessibility for construction and maintenance. ✓ The proposed route traverses properties owned by DTPC. ✓ Proposed route has a minimal number of bends (4 in total). ✓ The proposed conductor occurs at a distance of 35m from P197. ✓ The proposed powerline does not traverse any fixed structures. ✓ It is the shortest route (3.63km) and therefore most cost-effective in construction and maintenance. 	<ul style="list-style-type: none"> ✗ One pylon occurs within the 1:100 year flood lines. ✗ Crosses the existing 132kV powerline. ✓ Proposed pylons occurs moderately close proximity to existing roads, thereby optimizing accessibility for construction and maintenance. ✗ The proposed route traverses various properties under private ownership. ✗ There are a number of bends in the proposed route (10 in total). ✗ The proposed conductor crosses the P197 and is less than 35m from the P197. ✗ The proposed powerline traverses fixed structures along Poss Road, Draeger Road and Illovo industrial area. ✗ The proposed route is 4,16km (it is the third-longest route) and not cost-effective in construction and maintenance. 	<ul style="list-style-type: none"> ✓ No pylons occurs within the 1:100 year flood lines. ✓ Does not cross existing 132kV powerlines. ✓ Proposed pylons occurs in close proximity to existing roads, thereby optimizing accessibility for construction and maintenance. ✓ The proposed route traverses properties owned by DTPC. ✗ There are a number of bends in the proposed route (9 on total). ✗ The proposed conductor crosses the P197 and is less than 35m from the P197. ✓ The proposed powerline does not traverse any fixed structures. ✗ The route is 4.4km (it is the second-longest route) and not cost-effective in construction and maintenance. 	<ul style="list-style-type: none"> ✗ One pylon occurs within the 1:100 year flood lines ✓ Does not cross existing 132kV powerlines ✓ Proposed pylons occurs in close proximity to existing roads, thereby optimizing accessibility for construction and maintenance. ✓ The proposed route traverses properties owned by DTPC. ✗ There are a number of bends in the proposed route (14 in total). ✗ The proposed conductor crosses the P197 and is less than 35m from the P197. ✓ The proposed powerline does not traverse any fixed structures. ✗ The route is 5.03km (it is the longest route) and not cost-effective in construction and maintenance.
Heritage and Archaeological Resources	<ul style="list-style-type: none"> ✓ There are no heritage resources that will be impacted by the proposed route alignment. 	<ul style="list-style-type: none"> ✗ This is the least preferred route as it traverses a cemetery in the vicinity of Illovo industrial area. 	<ul style="list-style-type: none"> ✗ This is the second preferred route. It is located close to the Mother of Peace Orphanage. 	<ul style="list-style-type: none"> ✗ As this route is similar to Option 3a, it is the second preferred route. It is located close to the Mother of Peace Orphanage.

	Option 1 (Preferred Route Alignment)	Option 2	Option 3a	Option 3b
Ecological Aspects	<p>✓ Most preferred route from an ecological perspective.</p> <p>✗ Collision of birds with the line may occur as the line crosses the iLovu River. Can be mitigated by installation of bird flight diverters on the lines.</p>	<p>✗ Least preferred route.</p> <p>✗ Crosses a valley with natural woody vegetation (coastal scrub/thicket) in the north, therefore presents the potential for collision of avifauna.</p> <p>✗ One pylon on the edge of a cliff and coastal scrub/thicket. Construction will increase the potential for habitat degradation.</p> <p>✗ Collision of birds with the line may occur as the line crosses the iLovu river. Can be mitigated by installation of bird flight diverters on the lines.</p>	<p>Third preferred route.</p> <p>✗ Crosses a valley with natural woody vegetation (coastal scrub/thicket) in the north, therefore presents the potential for collision of avifauna.</p> <p>✗ Collision of birds with the line may occur as the line crosses the iLovu River. Can be mitigated by installation of bird flight diverters on the lines.</p>	<p>Second preferred route.</p> <p>✗ Crosses a valley with natural woody vegetation (coastal scrub/thicket) in the north, therefore has the potential for collision of avifauna.</p> <p>✗ Collision of birds with the line may occur as the lines crosses the iLovu River. Can be mitigated by installation of bird flight diverters on the lines.</p>
Wetlands and watercourses	<p>✓ There are no pylons within the wetlands and watercourses.</p>	<p>✗ A pylon will occur within a wetland.</p>	<p>✗ A pylon will occur within a wetland.</p>	<p>✗ A pylon will occur within a wetland.</p>
Aquatic impacts	<p>✓ The risks identified during the construction and operational phases of the project were mostly determined to be low.</p>	<p>✓ The risks identified during the construction and operational phases of the project were mostly determined to be low.</p>	<p>✓ The risks identified during the construction and operational phases of the project were mostly determined to be low.</p>	<p>✓ The risks identified during the construction and operational phases of the project were mostly determined to be low.</p>
<p>It was found that the impacts for all three of the powerline options were similar in nature on the receiving environment and will, therefore, have equivalent risks during the construction and operational phases. Thus, not one specific alternative has proved to be favoured.</p>				
Geotechnical	<p>The proposed powerline may be constructed based on the recommendations provided in the Geotechnical Report.</p>			
Geohydrological	<p>The proposed powerline substation will be situated in a low to moderate vulnerability area. There are no major groundwater risks associated with the construction and operational phase of the proposed KZN ASP powerline. There is no preference in selection of the proposed powerline route as all the impacts on groundwater are the same.</p>			
Visual	<p>✗ High visual impact due to impact on the farmhouse and residents of</p>	<p>✗ The visual impacts associated with line option 2 are very high due</p>	<p>✗ The visual impacts associated with line 3a are also very high due</p>	<p>✗ The visual impacts associated with line 3b are also very high due</p>

	Option 1 (Preferred Route Alignment)	Option 2	Option 3a	Option 3b
	<p>Poss Road and Draeger Crescent, as many of their views of the natural river valley landscape, would be broken by pylons and powerlines in close proximity.</p> <p>✓ This proposed powerline route is the most preferred of the other three (Option 2, 3a and 3b).</p>	<p>to its interruption of views from the Illovo Estate Club House, and its close proximity to the residents of Nelson Close, Poss Road (passing overhead of certain properties) and Draeger Crescent, as many of their views of the natural river valley landscape would be broken by pylons and powerlines in close proximity.</p> <p>✗ Least preferred route alignment.</p>	<p>to their close proximity to the residents of Poss Road, Draeger Crescent and Mother of Peace Children’s Home, as many of their views of the natural river valley landscape would be broken by pylons and powerlines in close proximity.</p> <p>✗ Second preferred route alignment.</p>	<p>to their close proximity to the residents of Poss Road, Draeger Crescent and Mother of Peace Children’s Home, as many of their views of the natural river valley landscape would be broken by pylons and powerlines in close proximity.</p> <p>✗ Second preferred route alignment.</p>
<p>VIA Recommendations:</p> <p>Route Option</p> <p>The VIA specialist suggested Option 4 as an alternative to route Options 1, 2, 3a and 3b to reduce the visual impact of residents of Poss Road, Nelson Close and Draeger Crescent. Refer to Option 4 in Figure 2-24. Option 4 passes north of these areas, reducing the impact on their views of the river valley. The residents in the valley situated north of Nelson Close have limited views that include other residences, roads, light industry, and several existing powerlines. As the character of this area is more transformed, Option 4 is considered more appropriate from a visual perspective. However, Option 4 is not feasible from a technical, biophysical and social perspective, due to the following reasons:</p> <ul style="list-style-type: none"> • It is the longest route (5.14km) and therefore, not cost-effective in construction and maintenance; • The proposed route traverses the P197, at four places and is less than 35m from the P197; • There are a number of bends in the proposed route (9 on total) increasing costs of construction; • The route traverses private properties within the Illovo industrial area; • The pylon occurs within the 1:100 year flood line; • Two pylons occur within the wetlands; • The proposed route traverses various properties under private ownership; and • The proposed route traverses a cemetery. <p>Due to the above reasons, Option 4 is not a feasible and reasonable alternative and has therefore not been assessed further in this BAR.</p>				

	Option 1 (Preferred Route Alignment)	Option 2	Option 3a	Option 3b
	<p>Alternative Proposed Substation Position</p> <p>The Visual Specialist recommended an alternative location for the proposed 132kV electrical substation. This alternative location is 100m south of the proposed position of the electrical substation. Refer to Figure 2-25.</p> <p>The proposed position of the electrical substation on the KZN ASP site makes it visible in large parts of Astra Park, Illovo South and the Mother of Peace Children’s Home. This is due to its positioning on the ridge, overlooking the iLovu River Valley. Should this substation be moved south 100 m (Figure 2-25), its visual impact can be reduced. The alternative position for the substation is far enough removed from the edge of the ridge that it is not seen in most parts of the valley, including the Mother of Peace Children’s Home and parts of the Eco-Trail. Views from the south of the alternative substation are increased but these views are not impacted significantly as they are to be overshadowed by the impact of the proposed Automotive Supplier Park.</p> <p>From a technical perspective, should the proposed substation be moved further south of its original position, the proposed powerline route Option 1 will have to follow the same route as Option 3b till it reaches the proposed substation. This would mean that a pylon will need to occur within a wetland and therefore not feasible. Therefore, the alternative position of the proposed substation as suggested by the VIA specialist will not be assessed further in this BAR.</p>			
Potential wetland offset receiving areas	✓ There are no pylons to be constructed in the potential wetland offset receiving area of the KZN ASP development.	✓ There are no pylons to be constructed in the potential wetland offset receiving area of the KZN ASP development.	✗ A pylon occurs within the potential wetland offset receiving area.	✗ A pylon occurs within the potential wetland offset receiving area.

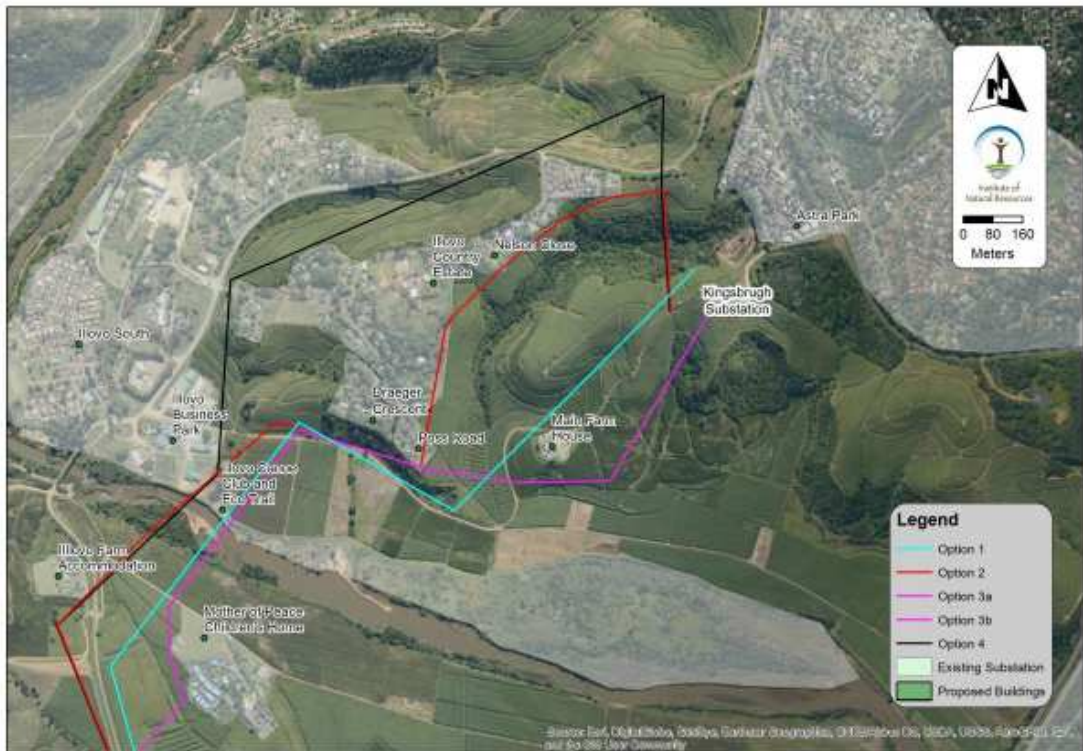


Figure 2-24: Visual Specialist Recommended Option 4 route alignment



Figure 2-25: Visual Specialist Recommended Alternative position for the proposed substation

2.10.5 Proposed road access options to the KZN ASP site

A description of the proposed road access alternatives is provided in Section 2.1.3. The locality map in **Error! Reference source not found.** shows the location of the different road access alternatives and **Error! Reference source not found.** below describes the advantages and disadvantages in more detail.

- ✓ Indicates Advantage
- ✗ Indicates Disadvantage

Table 2-24: Comparative assessment of the road access options to the site

	Option 0 (No road upgrades – status quo of the road network remains)	Option 1 (New full narrow diamond interchange on the N2)	Option 1c (New full narrow diamond interchange on the N2, with the R102 link bridge)	Option 1d (New R102 link bridge with no new interchange on N2)	Option 3b (New loop off-ramp for south-bound traffic, and new half narrow diamond N2 interchange for north-bound traffic and exit on N2 for north-bound traffic only)
Technical / Traffic Considerations	<p>X Travel time is the longest compared to direct interchange options (i.e. Option 1, 1c, 1d and 3b) and therefore is not feasible for Just-In-Time (JIT) delivery of automobile goods to Prospecton.</p> <p>X The existing P197 has poor geometry (windy and steep road), which is unsuitable for heavy good vehicles.</p> <p>X There is limited capacity for additional traffic on the existing P197.</p> <p>X P578 has limited capacity, is in poor condition and there is residential settlement close to road shoulders which may require land expropriation.</p> <p>X Kingsburgh and Mnini Interchanges have limited available capacity for additional road traffic.</p>	<p>✓ Fastest access point (compared to Option 3b) and route to Prospecton and other industrial areas to the north.</p> <p>✓ Design configuration of the interchange would improve safety as it contributes to slowing traffic before it enters into the central boulevard.</p> <p>✓ The route aligns with the initial phases of the proposed KZN ASP’s Central Boulevard, as it provides a straight alignment which is easier to navigate.</p> <p>✓ Provides for an opportunity to develop in stages, where the first stage could exclude R102 link. It allows for a cost-effective link to the R102 (at a later stage) which in turn increases regional accessibility between the internal rural areas and the</p>	<p>✓ Reduced vehicle kilometres compared to Options 0 & 3</p> <p>✓ Reduced travel time as compared to option 0 & 3</p> <p>✓ Allows access to the R102 by construction of the R102 link bridge.</p> <p>X Private land has to be acquired for construction of the R102 link road and interchange.</p>	<p>✓ Allows access to the R102 by the construction of the R102 link bridge.</p> <p>X Private land has to be acquired for construction of the R102 link road.</p> <p>X No access to the north on the N2 required for just-in-time delivery.</p>	<p>X The proposed Central Boulevard must be re-aligned to facilitate alternative N2 access point.</p> <p>X Additional travel time and distance by vehicles accessing the proposed KZN ASP site.</p> <p>X Additional length to high order road for proposed central boulevard (approximately 1 km) as well as larger interchange footprint is anticipated.</p> <p>X There is increased construction costs associated with this access route option.</p> <p>X Does not provide for effective improvement of regional accessibility between the internal rural areas and the coastal strip, with no access option onto</p>

	Option 0 (No road upgrades – status quo of the road network remains)	Option 1 (New full narrow diamond interchange on the N2)	Option 1c (New full narrow diamond interchange on the N2, with the R102 link bridge)	Option 1d (New R102 link bridge with no new interchange on N2)	Option 3b (New loop off-ramp for south-bound traffic, and new half narrow diamond N2 interchange for north-bound traffic and exit on N2 for north-bound traffic only)
		coastal strip. X Private land has to be acquired for construction of the interchange.			the R102. ✓ Free flow ramps reduce delays at intersections. ✓ DTPC owns the land on which the proposed circular loop ramp is located.
Heritage and Archaeological Resources	All proposed access route options are feasible. The receiving environment has low to medium potential to yield previously unidentified archaeological sites during subsurface excavations and construction work. There is no preference for the selection of proposed access route options.				
Ecological Aspects	✓ There will be no road upgrades, and the status quo of the road network will remain. Second preferred option.	X Impacts negatively on wetland habitat although the narrow diamond design does attempt to minimise the impact as far as possible by keeping the ramps and pillars as far out of the wetland as possible. This option is better than Options 1c and 1d, although the overall impact is MODERATE to HIGH negative. Third preferred option.	X Impacts negatively on wetland habitat although the narrow diamond design does attempt to minimise the impact as far as possible by keeping the ramps as far out of the wetland as possible. The support pillar for the bridge will have a HIGH negative impact on the wetland habitat as it will need to support a bridge deck in both directions. X Impacts negatively on natural forest and forest edge habitat including	X The support pillar for the bridge will have a HIGH negative impact on the wetland habitat as it will need to support a bridge deck in both directions. X Impacts negatively on natural forest and forest edge habitat including protected tree species. The layout has been designed to minimise impacts by aligning through the most disturbed areas of the	✓ This option will have less of an impact on natural areas compared to the other options and is preferred from an ecological perspective. The loop ramp will have a MODERATE to LOW negative impact on the upper reaches of a drainage line and a small portion of the coastal thicket. Impacts can be mitigated.

	Option 0 (No road upgrades – status quo of the road network remains)	Option 1 (New full narrow diamond interchange on the N2)	Option 1c (New full narrow diamond interchange on the N2, with the R102 link bridge)	Option 1d (New R102 link bridge with no new interchange on N2)	Option 3b (New loop off-ramp for south-bound traffic, and new half narrow diamond N2 interchange for north-bound traffic and exit on N2 for north-bound traffic only)
			protected tree species. The layout has been designed to minimise impacts by aligning through the most disturbed areas of the forest and as close to the boundary of the land parcel as possible. Nevertheless, natural vegetation will be removed and edge effects will be expected. Impacts will be HIGH negative, but cumulative impacts may be reduced further with the implementation of a strictly adhered to forest rehabilitation plan for the remaining areas within the land parcel. Least preferred option	forest and as close to the boundary of the land parcel as possible. Nevertheless, natural vegetation will be removed and edge effects will be expected. Impacts will be HIGH negative, but cumulative impacts may be reduced further with the implementation of a strictly adhered to forest rehabilitation plan for the remaining areas within the land parcel. This option is better than Option 1c. Fourth preferred option	
Wetlands and watercourses	✓ There will be no road upgrades, and the status quo of the road network will remain.	✗ Impacts negatively on wetland habitat although the narrow diamond design does attempt to minimise the impact as far as possible	✗ Impacts negatively on wetland habitat although the narrow diamond design does attempt to minimise the impact as far as possible by	✗ The support pillar for the bridge will have a HIGH negative impact on the wetland habitat as it will need to support a	✓ This option will have less of an impact on natural areas than the other options and is preferred from an ecological perspective.

	Option 0 (No road upgrades – status quo of the road network remains)	Option 1 (New full narrow diamond interchange on the N2)	Option 1c (New full narrow diamond interchange on the N2, with the R102 link bridge)	Option 1d (New R102 link bridge with no new interchange on N2)	Option 3b (New loop off-ramp for south-bound traffic, and new half narrow diamond N2 interchange for north-bound traffic and exit on N2 for north-bound traffic only)
		by keeping the ramps and pillars as far out of the wetland as possible. This option is better than Options 1c and 1d, although the overall impact is MODERATE to HIGH negative. Third preferred option.	keeping the ramps as far out of the wetland as possible. The support pillar for the bridge will have a HIGH negative impact on the wetland habitat as it will need to support a bridge deck in both directions.	bridge deck in both directions.	The loop ramp will have a MODERATE to LOW negative impact on the upper reaches of a drainage line and a small portion of the coastal thicket. Impacts can be mitigated.
Visual	<p>✓ There are no road upgrades for this Option and the status quo of the road network will remain with no visual impact.</p>	<p>✓ This route access option has the least impact in terms of visual intrusion.</p> <p>✗ The residents of Larnaco as well as those travelling along the N2 are sensitive receptors. The narrow diamond structure is visible.</p> <p>✓ Due to the existing undulating topography, the narrow diamond interchange is placed between two hills, helping to visually screen it from the neighbouring area. Therefore, it is deemed not as visually imposing as the</p>	<p>✓ There is a negligible difference between visual impacts of Option 1 and Option 1c.</p> <p>✓ There is low impact as there is similar road infrastructure along the N2 such as the R603 overpass which is 2.2km from this route access option.</p> <p>✗ The Larnaco residents are affected, as this R102 link is directly in their line of sight. The narrow diamond structure is also visible.</p> <p>✗ The existing undulating topography means that the R102 link will be visible from</p>	<p>✓ The residents of Larnaco are affected by the R102 link as it is directly in their line of site.</p> <p>✓ There is low impact as there is similar road infrastructure along the N2 such as the R603 overpass which is 2.2km from this route access option.</p> <p>✗ The existing undulating topography means the R102 link will be visible from surrounding high viewpoints and residents.</p>	<p>✗ The Panorama Park residents are affected, as well as those travelling on the N2.</p> <p>✗ The proposed loop is a larger structure and is more visually imposing on the existing landscape.</p> <p>✗ Low VAC as there are no similar loop interchanges in the immediate vicinity. This creates a higher level of visual disturbance.</p> <p>✗ Highest visual impact (least preferred access option) due to the proposed additional circular loop.</p>

	Option 0 (No road upgrades – status quo of the road network remains)	Option 1 (New full narrow diamond interchange on the N2)	Option 1c (New full narrow diamond interchange on the N2, with the R102 link bridge)	Option 1d (New R102 link bridge with no new interchange on N2)	Option 3b (New loop off-ramp for south-bound traffic, and new half narrow diamond N2 interchange for north-bound traffic and exit on N2 for north-bound traffic only)
		<p>other options.</p> <ul style="list-style-type: none"> ✓ High Visual Absorption Capacity (VAC) due to existing similar structures along the N2 in the immediate vicinity. ✓ This is the most preferred option in terms of the visual impact. 	<p>surrounding high viewpoints and residents. The addition of the narrow diamond structure is a further visual imposition.</p> <ul style="list-style-type: none"> ✗ Similar structures already exist along the N2, but somewhat more imposing on the existing landscape than option 1D, due to addition of narrow diamond. ✗ This is the third preferred access road option. 	<ul style="list-style-type: none"> ✗ This option has medium VAC. Similar structures already exist along the N2 but would be more imposing on the existing landscape. ✗ This is the second most preferred road access option. 	
Noise	<ul style="list-style-type: none"> ✗ There are a large number of existing dwellings along the P578 and Mnini Road, which are sensitive noise receptors. The noise impact of additional road traffic will be VERY HIGH on these sensitive receptors. 	<ul style="list-style-type: none"> ✗ The nearest sensitive receptor is 80m from the centre-line of the nearest carriageway. The projected rise in noise levels in the adjacent residential area of Panorama Park is due to a combination of the reduced distance of the nearest sensitive receptors to the southern-going on and off-ramps and the doubling of the peak hour traffic flow. ✗ The noise impact of this design will be in the 	<ul style="list-style-type: none"> ✗ The nearest sensitive receptor is 35m from the centre-line of the link road to the R102 (i.e. Larnaco residents adjacent to the existing forested area. ✗ The nearest sensitive receptor to the N2 is 80m from the centre-line of the nearest carriageway of the N2 (i.e. Larnaco residents east of the N2). ✗ The projected rise in noise levels in the northern part of the adjacent residential area 	<ul style="list-style-type: none"> ✗ There are two sensitive receptors associated with this option i.e. (i) residents at Illovo Beach that are 22m) from the centreline of the R102; and (ii) Larnaco residents adjacent to the existing forested area, that are 35m from the centre-line of the link road to the R102. ✓ Noise levels from the N2 will remain substantially unchanged. 	<ul style="list-style-type: none"> ✗ The nearest sensitive receptor is residents of Panorama Park that are 30m from the centre-line of the loop to the proposed KZN ASP. ✗ The projected rise in noise levels in the southern part of the adjacent residential area of Panorama Park is due to a combination of the reduced distance of the nearest sensitive receptors to this south-going off-ramp and the doubling of the peak

	Option 0 (No road upgrades – status quo of the road network remains)	Option 1 (New full narrow diamond interchange on the N2)	Option 1c (New full narrow diamond interchange on the N2, with the R102 link bridge)	Option 1d (New R102 link bridge with no new interchange on N2)	Option 3b (New loop off-ramp for south-bound traffic, and new half narrow diamond N2 interchange for north-bound traffic and exit on N2 for north-bound traffic only)
		<p>category MODERATE.</p> <p>✓ This access route option generates the lowest predicted noise impact in comparison with the other four access road options.</p>	<p>of Larnaco Residential is due to a combination of the reduced distance of the nearest sensitive receptors to the southern-going on and off-ramps and the doubling of the peak hour traffic flow on the N2. It has been assumed that the majority of the peak hour traffic will use the N2 highway leaving the link to the R102 to provide a secondary access route for local or overflow traffic comprising an assumed 10% of the total traffic flow into the proposed ASP.</p> <p>✗ The noise impact of this design at assessment position on Larnaco residents east of the N2 will be MODERATE, and at assessment position on Larnaco Residents adjacent to the existing forested area will be in the category HIGH.</p>	<p>✗ Noise levels for sensitive receptors i.e. Larnaco residents adjacent to the forested area will be significant.</p> <p>✗ The absence of a link to the N2 means that all the peak hour traffic to the proposed KZN ASP will use the link to the R102, leading to a very high noise level at all positions along this road.</p> <p>✗ The noise impact of this design will be in the category VERY HIGH for residents of Illovo Beach, adjacent to the R102) and HIGH at sensitive receptors of the Larnaco residential area adjacent to the forested area.</p>	<p>hour traffic flow on the N2.</p> <p>✗ It has been assumed that the majority of the peak hour traffic will use the N2 highway.</p> <p>✗ The noise impact of this design will be in the category VERY HIGH.</p>
Socio-economic impacts	✗ This option is ranked as the third least impact on	✓ This option is ranked as the preferred access road	✗ This option is the second most preferred access road	✗ This option is the least preferred or the most	✗ This option is the 4 th least impact option as it impacts

	Option 0 (No road upgrades – status quo of the road network remains)	Option 1 (New full narrow diamond interchange on the N2)	Option 1c (New full narrow diamond interchange on the N2, with the R102 link bridge)	Option 1d (New R102 link bridge with no new interchange on N2)	Option 3b (New loop off-ramp for south-bound traffic, and new half narrow diamond N2 interchange for north-bound traffic and exit on N2 for north-bound traffic only)
	<p>the surrounding communities, mainly those along the P578, P197 and the R603 as these roads will have the most traffic as a result of the proposed ASP.</p> <p>X There are negative impacts on property values, short-term increase in traffic volumes leading to an increase in traffic and inconvenience and a potential increase in crime in the communities residing close to the P578, P197 and R603.</p>	<p>option.</p> <p>✓ The negative operational and maintenance impacts from Option 1 is low and no significant negative impacts are identified.</p>	<p>option.</p> <p>X Traffic movement will be predominantly along the N2 and R012.</p>	<p>impacting option, as it impacts significantly on traffic movement along the R102.</p>	<p>on Panorama Park during construction.</p> <p>X There are negative impacts on property values, short-term increase in traffic volumes leading to an increase in traffic and inconvenience and a potential increase in crime in the Panorama Park area.</p>
Air Quality Impacts	<p>X This option has the worst impact (ranked 5th in order of preference) on sensitive receptors in terms of potential health impacts, based on simulated ground-level impacts as well as excess lifetime cancer risk.</p>	<p>X This option is ranked 2nd in order of preference and has low air quality impacts on the sensitive receptors based on simulated ground-level impacts as well as excess lifetime cancer risk.</p>	<p>X This option is ranked 3rd in order of preference and has low air quality impacts on the sensitive receptors based on simulated ground-level impacts as well as excess lifetime cancer risk.</p>	<p>✓ This option is ranked as the most preferred road access option and has low air quality impacts, based on simulated ground-level impacts as well as excess lifetime cancer risk.</p>	<p>X This option is ranked 4th in order of preference and has high air quality impacts on sensitive receptors, such as Panorama Park, based on simulated ground-level impacts as well as excess lifetime cancer risk.</p>

2.10.6 Site Layout Alternatives

There are two Site Layout Alternatives which are directly related to the road access options. Option 1 Site Layout Plan will be preferred layout, should Option 1, 1c or 1d be the preferred access option. Option 3 Site Layout Option will be the preferred layout should access from road access option 3b preferred. There is no difference between the two layouts in terms of areas of impact on the wetlands.

2.10.7 No-go alternative

The “No Go” alternative refers to the alternative of not embarking on the proposed project. This alternative would imply that the current biophysical and socio-economic environment will prevail. Should the project not go ahead, there would be no negative impacts in terms of noise, visual, ecological, wetlands, air quality, traffic and other socio-economic impacts.

Without the proposed establishment of the industrial township for the proposed ASP and associated land uses, the status quo as it currently exists, would remain. Thus, in the absence of the proposed development, there would be no provision to realise the goals of the South African Automotive Masterplan (SAAM) to 2035. This Masterplan is intended to develop a clear, strategic roadmap for the development of the South African automotive industry through to 2035 (Barnes & Black, 2017).

The SAAM’s 2035 vision is the achievement of “a globally competitive and transformed industry that actively contributes to the sustainable development of South Africa’s productive economy, creating prosperity for industry stakeholders and broader society.”

The four components of global competitiveness, industry transformation, sustainable development, and societal contribution represent the aspirational heart of the SAAM vision (Barnes & Black, 2017).

However, should the no-go alternative be implemented, there will be no initiative for the South African automotive industry to be globally competitive (relative to leading international automotive producers). The second component relates to the industry’s contribution to the transformation of the South African economy. This encompasses multiple elements, from employment equity to the greater inclusion of Black-owned firms within the automotive value chain. The no-go alternative will not lead to an impetus for this to be realised.

The third component relates to the sustainable development of the South African economy. The critical elements encompassed within this component relate to the growth of the industry, employment provided, skills developed, and the improved environmental impact of products and production processes. The final component relates to the shared prosperity created by the industry, with the critical elements here comprising the financial health and wellbeing of firms within the value chain, fair employee remuneration, and the broader contribution of the value chain to the South African fiscus. In light of the vision of SAAM, the no-go option is therefore not feasible at this stage.

The Automotive industry plays a significant role in social and economic development and therefore the Government has recognised that vehicle production and component manufacturing are important in creating new sustainable employment opportunities across the automotive value chain and enhancing the trade balance of SA. Should the proposed development not be approved, these objectives would not be attained.

2.11 Environmental Legal Requirements

2.11.1 Environmental Impact Assessment

In terms of NEMA and the associated EIA Regulations, 2014 (as amended in April 2017), Environmental Authorisation must be obtained from the relevant decision-making authority, the DEA. This must be done prior to the commencement of certain listed activities that may result in potential negative impacts on the environment. The proposed project involves the following listed activities, as per GNR. 983 and 985 of the EIA Regulations, 2014 (as amended).

Table 2-25: Table of Listed Activities

Number and date of the relevant notice	Activity No(s) and description (in terms of the relevant notice)	Describe each listed activity as per the project description (and not as per the wording of the relevant Government Notice)
Listing Notice 1: GNR. 983 (dated 7 April 2017)	Activity 19: <i>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse.</i>	As far as possible, the applicant has followed the mitigation hierarchy to avoid, minimise, mitigate, rehabilitate and/or offset as the last resort with regard to impact on wetlands. However, in instances where the development layout will encroach on wetlands, there will be more than 10m ³ of material that may be infilled or excavated as a result of the proposed development activities. The infilling is with regards to earthworks for the construction of the various platforms and roads and services infrastructure.
Listing Notice 1: GNR. 983 (dated 7 April 2017)	Activity 27: <i>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.</i>	<p>There may be areas of indigenous vegetation that will need to be cleared to make way for the proposed development activities, but it will not exceed 20ha in extent.</p> <p>The majority of the site is currently used for sugar cane cultivation and these areas are therefore transformed. Areas of high ecological significance within the proposed KZN ASP site is steep and unsuitable for development. The vegetation will therefore not be impacted. Cumulatively, there will be a clearance of more than 1ha of indigenous vegetation for the construction of the sewer line and various road access options.</p>
Listing Notice 1: GNR. 983 (dated 7 April 2017)	Activity 28: <i>Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: will occur inside an urban area, where the total land to be developed is bigger than 5 hectares.</i>	The proposed development of the automotive supplier park (incorporating industrial land uses) will occur on land previously used for sugar cane cultivation. The proposed development layout is approximately 264.82ha in extent and occurs within an urban area.
Listing Notice 3: GNR. 983 (dated 7 April 2017)	Activity 12: <i>The clearance of an area of 300m² or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan, in</i> <i>d) KZN,</i> <i>(iv) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the</i>	The proposed alternative access road options 1, 1c, 1d and 3b, as well as the sewer line, will entail the clearance of more than 300m ² of indigenous vegetation.

Number and date of the relevant notice	Activity No(s) and description (in terms of the relevant notice)	Describe each listed activity as per the project description (and not as per the wording of the relevant Government Notice)
	<p><i>National Spatial Biodiversity Assessment 2004. (v) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.</i></p>	
<p>Listing Notice 3: GNR 983 (dated 7 April 2017)</p>	<p>Activity 14: <i>The development of:</i></p> <p><i>(ii) infrastructure or structures with a physical footprint of 10 square metres or more;</i></p> <p><i>Where such development occurs-</i></p> <p><i>(a) Within a watercourse; [or]</i></p> <p><i>(c) If no development setback exists, within 32 meters of a watercourse, measured from the edge of the watercourse;</i></p> <p><i>d. KwaZulu-Natal</i></p> <p><i>vii. Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.</i></p> <p><i>xi Inside urban areas, in (aa) areas zoned for use as public open space.</i></p>	<p>The proposed development of the KZN ASP, sewer line, powerline and access road options exceeds 10m² in extent and in some instances, occurs within the watercourses and in other instances occurs within 32m of a watercourse. The study area falls within the CBA's and in D'MOSS areas.</p>
<p>Listing Notice 3: GNR 983 (dated 7 April 2017)</p>	<p>Activity 18: <i>The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre, in d) KZN, (viii) in Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans</i></p> <p><i>(xiii) Inside urban areas:</i></p> <p><i>(aa) Areas zoned for use as public open space</i></p>	<p>The alternatives 1, 1c, 1d and 3b road access options will occur within the CBA and in D'MOSS areas.</p>

2.11.2 Water Use Licence

A specialist Wetland Assessment was undertaken by GIBB (Pty) Ltd represented by Ms. Salicia Gounden and peer-reviewed by Mr. Adam Teixeira-Leite (completed August 2019) for the proposed development of the KZN ASP project (a copy of the specialist report is attached in **Appendix D13**). The findings of this assessment indicate that Wetlands found on site included the numerous seeps, three channelled valley bottoms, an unchannelled valley bottom and two riparian areas. The wetland and riparian delineation is illustrated in **Error! Reference source not found.**.

In terms of the National Water Act (Act No 36 of 1998) [NWA], a Water Use License Application (WULA) is required. This is a legislative process governed by the Department of Water and Sanitation (DWS) for the authorisation of all water uses defined in section 21 of the NWA (Refer to Error! Reference source not found. below for the associated triggers).

Table 2-26: Water Uses triggered in terms of Section 21 of the National Water Act

Activity No	Description
Section 21 (c)	Impeding and diverting the flow of water in a watercourse
Section 21 (i)	Altering the bed, bank, course or characteristics of a watercourse

A pre-application meeting for the WULA process took place with DWS on 11 October 2018. Construction of the proposed development may not commence until such time as the necessary authorisation has been obtained.

2.11.3 Other Applicable Legislation, Policies and/or Guidelines

Legislation	Applicability To The Project
The Constitution of the Republic of South Africa, Section 24 (Environmental Right):	<p><i>“Everyone has the right -</i></p> <ul style="list-style-type: none"> <i>a. to an environment that is not harmful to their health or well-being;</i> <i>and</i> <i>b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:</i> <ul style="list-style-type: none"> <i>i. prevent pollution and ecological degradation;</i> <i>ii. promote conservation; and</i> <i>iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”</i> <p>The NEMA was enacted as “a reasonable legislative measure” to give effect to the Environmental Right. The fact that the proposed development is undergoing an application process for Environmental Authorisation, in compliance with the requirements of the NEMA, will ensure the protection of this right.</p>
National Environmental Management Act, 1998 (Act no. 107 of 1998) (NEMA) and the EIA Regulations, 2014 (as amended).	NEMA is the key environmental management legislation and states in section 2(4)(k) that “the environment is held in public trust for the people, the beneficial use of resources must serve the public interest and the environment must be protected as the people’s common heritage” thereby paving the way for an EIA process to assess developments that

Legislation	Applicability To The Project
	<p>may have a harmful impact on the environment.</p> <p>Section 28 of NEMA ensures that environmental screening is incorporated into each activity, although it is not formally termed as such. Section 28 (1) imposes a duty which requires that:</p> <p>“Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment”.</p> <p>The EIA regulations describe the EIA process to be followed including the public participation process and the listed activities that may have a harmful impact on the environment and must be assessed. For the purpose of this project a BA and associated specialist studies will be undertaken.</p>
<p>National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008) (NEM: WA)</p>	<p>This Act provides for regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation. Also to provide for national norms and standards for regulating the management of waste by all spheres of government; to provide for specific waste management measures; to provide for the licensing and control of waste management activities.</p> <p>Although none of the proposed activities is likely to trigger activities in terms of the Waste Act, waste will still be generated on site and needs to be managed accordingly. By undertaking this BA and associated EMPr, certain mitigation measures will be implemented to reduce potential impacts of waste generation in all its forms.</p>
<p>National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004); (NEM: AQA)</p>	<p>Crucially, in terms of section 21 of the NEM: AQA the relevant authority may promulgate a list of activities which result in atmospheric emissions which are reasonably believed to have a significant detrimental effect on the environment. No person may conduct an activity so listed without a provisional atmospheric emission licence (AEL).</p> <p>As potential tenants are not known for the proposed development activities, an AEL will not be required for the project. However, potential tenants must apply for an AEL should their activities the need for this. Prior to establishment on site, the AEL must be approved by the Local Municipality.</p>
<p>National Water Act, 1998 (Act no. 36 of 1998) (NWA)</p>	<p>This Act provides for the protection and management of water resources. A Water Use License Application (WULA) is made to authorise water use activities pertaining to the altering of the bed, bank, course and characteristics of the watercourse and for impeding and diverting the flow of water in a watercourse (where applicable).</p> <p>A WULA will be commissioned for the project.</p>

Legislation	Applicability To The Project
National Heritage Resources Act, 1999 (Act No. 25 of 1999); (NHRA)	<p>The NHRA serves to introduce an integrated and interactive system for the identification, assessment and management of the heritage resources of South Africa. The NHRA promotes good governance and the empowerment of civil society to preserve their heritage for future generations and states the principles of heritage resource management while making provision for legislation protecting national heritage.</p> <p>The potential impact to heritage resources through the implementation of the proposed development site for the KZN ASP is very low considering the majority of the site is on sugar cane plantation already.</p> <p>There are no heritage resources along the various access options proposed for the development, the proposed sewer line and Option 1 and 3a and 3b powerline route options.</p> <p>Option 2 powerline route alignment traverses a cemetery. However, this is not the preferred powerline route alignment.</p>
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEM: BA)	<p>The National Environmental Management: Biodiversity Act (NEM: BA) has as an objective to provide for the management and conservation of biological diversity within the Republic and of the components of such biological diversity. As such the focus of this legislation is on the preservation of species and ecosystems irrespective of whether or not they are situated in protected areas.</p> <p>Chapter 4 of the NEM: BA is particularly relevant and provides for:</p> <ul style="list-style-type: none"> • The protection of threatened or protected ecosystems, with particular emphasis on critically endangered, endangered, vulnerable and protected ecosystems. – List of Threatened Ecosystems (Notice 1002 of Government Gazette 34808 dated 9 December 2011); • Listing of species that are threatened or in need of protection to ensure their survival in the wild, while regulating the activities, including trade, which may involve such listed threatened or protected species and activities which may have a potential impact on their long-term survival. - Threatened or Protected Species Regulations (Regulation 152 of 2007). • The protection of our natural systems from invasive species. <p>Chapter 5 of this Act specifically deals with Species and Organisms Posing Potential Threats to Biodiversity. To summarise, the purpose of Chapter 5 is to:</p> <ul style="list-style-type: none"> • Prevent the unauthorised introduction and spread of alien species and invasive species to ecosystems and habitats where they do not naturally occur; • To manage and control alien species and invasive species to prevent or minimise harm to the environment and to biodiversity in particular; and • To eradicate alien species and invasive species from ecosystems

Legislation	Applicability To The Project
	<p>and habitats where they may harm such ecosystems or habitats.</p> <p>Furthermore, Section 73 (2) states that a person who is the owner of land on which a listed invasive species occurs must:</p> <ul style="list-style-type: none"> • Notify any relevant CA, in writing, of the listed invasive species occurring on that land; • Take steps to control and eradicate the listed invasive species and to prevent it from spreading; and • Take all the required steps to prevent or minimise negative impacts on biodiversity. <p>As such, an Ecological Assessment (floral, faunal and avifaunal components) was undertaken for the KZN ASP development site, the electrical powerline route alignments and the proposed sewer line route alignment. Plant species of conservation concern, including nationally and provincially protected species were recorded within the coastal thicket on the ASP site, on the edges of the coastal thicket and sugar cane on the KZN ASP site, and in the coastal forest and coastal thicket associated with access Options 1c and 1d.</p> <p>For cutting, destroying, removal or relocation, species of conservation concern and provincially protected species will require a permit from the provincial authority (EKZNW), and nationally protected trees will require a permit from the national authority (DAFF).</p> <p>The recommendation is that just prior to construction, a botanical walk-through must be conducted in the entire construction footprint to identify any such species for permitting requirements. <i>(This cannot be determined at this stage as some plants might establish in new areas between now and prior to the commencement of construction).</i></p>
Occupational Health and Safety Act, 1993 (Act no. 85 of 1993) (OHS)	<p>While consideration for management of health and safety falls outside the purpose of this document, there are a number of overlaps and synergies that are relevant in terms of environmental management.</p> <p>The OHS Act imposes various duties on employers to ensure the health and safety of their employees, including taking steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the health and safety of their employees, providing the necessary information, instructions, training and supervision, as well as not permitting any employee to do any work or to produce, process, use, store, handle or transport any article or substance or to operate any plant or machinery unless the precautionary measures have been taken. In addition, there is a veritable myriad of regulations promulgated under the OHS Act which may have relevance to the depot project, in regard to safe working conditions in that context. They include the General Administrative Regulations, General Safety Regulations, Construction Regulations and the Environmental Regulations for Workplaces.</p>

Legislation	Applicability To The Project
	The Dube TradePort Corporation (DTPC) needs to consider the general duties of employers to their employees with regards to Health and Safety on site during construction. DTPC also needs to consider general duties of employers and self-employed persons to persons other than their employees.
Hazardous Chemical Substance Regulations 1995	<p>These regulations stipulate requirements for storage and handling of hazardous chemical substances and provide guidelines for the training of staff.</p> <p>Any hazardous chemical substances used during construction must be identified, stored used and disposed of in accordance with this legislation.</p>
Environmental Regulations for Workplaces 1987	These regulations specify optimal working conditions for staff including thermal conditions, illumination requirements, requirements for ventilation; noise levels etc. and also specify requirements for housekeeping.
General Administrative Regulations 2003	These regulations stipulate the administration of the various Occupational Health and Safety regulations incusing designation of health and safety committees, reporting and recording of incidents and occupational diseases.
Construction Regulations 2003	These Regulations apply to any persons involved in construction work and are therefore applicable to the construction phase. The regulations provide guidelines for safe operation during construction.
Environment Conservation Act (Act 73 of 1989)	<p>The Act outlines general prohibitions for noise control. It also specifies noise management during construction. Specifically, section 3(i) states that no person shall use any power tool or power equipment for construction, earth drilling or demolition works, or allow it to be used, in a residential area during the following periods of time:</p> <ul style="list-style-type: none"> i) Before 06:00 and after 18:00 from Monday to Saturday; and ii) At any time on any Sunday, Good Friday, Ascension Day, Day of the Covenant and Christmas Day, or any other day as may be determined by a local authority; <p>The provisions of the regulations may not apply if any person may by means of a written application, in which the reasons are given in full, apply to the local authority concerned for exemption from any provision of these Regulations.</p>
Noise induced Hearing Loss Regulations 2003	These regulations specify safe working conditions in environments where noise levels exceed safe levels and give guidelines for assessment of noise, training measures, provisions of information to staff etc.
National Environmental Management: Air Quality Act (No. 39 of 2004)	The aim is to reform the law regulating air quality in order to protect and enhance the quality of air in South Africa.
Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965)	<ul style="list-style-type: none"> • Part IV: Dust Control; and • Part V: Air Pollution by fumes emitted by vehicle emissions.
National Environmental Management Waste Act (No. 59	Section 20 of the NEM: WA states that no person may commence, undertake or conduct a waste management activity except in

Legislation	Applicability To The Project
of 2008)	<p>accordance with a WML. A list of waste management activities that require a WML was published in GNR 921 (29 November 2013). GNR 921 states that a person who wishes to commence with a waste management activity must undertake the required BA or S&EIR process in accordance with GNR 326 stipulated under NEMA.</p> <p>GIBB undertook a detailed analysis of the listed activities contained in GNR 921 none of the activities is applicable to the current project stage.</p>
National Forest Act (Act No. 84 of 1998)	<p>To reform the law on forests; to repeal certain laws: and to provide for related matters.</p> <ul style="list-style-type: none"> • everyone has the constitutional right to have the environment protected for the benefit of present and future generations; • natural forests and woodlands form an important part of that environment and need to be conserved and developed according to the principles of sustainable management; • plantation forests play an important role in the economy; • plantation forests have an impact on the environment and need to be managed appropriately; • the State’s role in forestry needs to change; and • the economic, social and environmental benefit of forests has been distributed unfairly in the past.
Conservation of Agricultural Resources Act (Act No. 43 of 1983) (CARA)	<p>To provide for control over the utilisation of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.</p>
KwaZulu-Natal Environmental, Biodiversity and Protected Areas Management Bill, 2014 (Gen N4, PG1314, 25 February 2015)	<p>To provide for the establishment, functions and powers of Ezemvelo KZN Wildlife; the protection and management of the environment and biodiversity; the protection and conservation of indigenous species, ecological communities, habitats and ecosystems; the management of the impact of certain activities on the environment; the sustainable use of indigenous biological resources; the declaration and management of protected areas; and to provide for matters connected therewith.</p>
National Spatial Biodiversity Assessment	<p>The NSBA establishes protection and conservation priority status for terrestrial, inland water, estuarine and marine ecosystems at a 1:250,000 scale nationally and suggested implementation options for priority areas. It provides the national context for the development of biodiversity plans at the sub-national and local scale.</p>
The Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000)	<ul style="list-style-type: none"> • Definitions (Section 1); • Procedural Fairness (Section 3, 4 and 6); • Right to Reasons for Decisions (Section 5); and • Judicial Review (Section 6 and 8).
Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)	<p>The purpose of the Promotion of Access to Information Act (“PAIA”) is to give effect to the constitutional right of access to any information held by the State and any information that is held by another person and that is required for the exercise or protection of any rights, and to provide for matters connected therewith.</p>

Legislation	Applicability To The Project
National Environmental Management Act (Act No. 107 of 1998) Public Participation Guideline (GN.R807 of 2012)	<p>In 2010, the Minister gazetted a new set of regulations on the requirements for conducting EIAs in terms of Chapter 5 of NEMA. In order to assist potential Applicants, interested and affected parties and environmental assessment practitioners to understand their role, the DEA has produced a series of guidelines. These guidelines must be read in line with NEMA and the EIA Regulations of 2010 as they do not substitute primary legislation. The guideline updates and revises the draft integrated environmental management guideline which was developed in 2005. The public participation guideline provides for inter alia: the minimum legal requirements for public participation processes (PPP); the steps of a PPP; guidelines for planning a PPP; and a description of the roles and responsibilities of the various role-players.</p>
Provincial Spatial Economic Development Strategy (PSEDS)	<p>The PSEDS is aimed at transforming the structure of the economy and narrowing and eventually eliminating the gap between the first and second economies. The four pillars of the strategy are as follows:</p> <ul style="list-style-type: none"> • Increasing investment in the province; • Skills and capacity building; • Broadening participation in the economy; • Increasing competitiveness; • The PSEDS identifies the sectors of the provincial economy which will drive the growth of the province and address unemployment and poverty as follows: <ul style="list-style-type: none"> • Agriculture - including agri-industry (with opportunities to impact considerably on the economic needs of the poor through Land Reform); • Industry - including heavy and light industry and manufacturing; • Tourism - including domestic and foreign tourism; and • The service sector - including financial, social, transport, retail and government.
Accelerated Shared Growth Initiative for South Africa (ASGISA)	<p>ASGISA resulted from Government's commitment to halve unemployment and poverty by 2014 and was launched in February 2006. ASGISA is not a government programme but a national initiative supported by key groups in the economy viz, Business, Labour, State-owned enterprises, Government economic agencies, Entrepreneurs and all spheres of government.</p>
2035 KwaZulu-Natal Provincial Growth and Development Strategy and Plan (PGDSP)	<p>The 2035 KZN PGDS and PDGP seeks to support and promote industrial growth of development of the automotive sector as a key job creating and productive sector of the provincial economy.</p> <p>In the context of the PGDP, an infrastructure Catalytic Project is defined as a project of significant scale (i.e. its reach) and scope (i.e. impact on employment, services, economic and social investment, and/or rates), thereby displaying some or all of the following characteristics:</p> <ul style="list-style-type: none"> • It makes a substantial impact, • It provides leverage and/or creates multiplier effects, • It has the power to radically activate development (social, economic or both),

Legislation	Applicability To The Project
	<ul style="list-style-type: none"> • It significantly impacts spatial form, • It creates jobs, and increase land value; and • Contributes to the achievement of the vision and goals of the Province <p>The proposed ASP project is identified as a catalytic project that is intended to meet the Province’s strategic goals and is funded by the KZN EDTEA (Economic Development Unit). This Catalytic Project forms an integral part of the PGDP.</p> <p>There are different categories of Catalytic Projects. Some are mostly government projects driven through social need and demand, whilst others are largely private sector driven to capitalise on economic development opportunities. In this context three types of catalytic projects have been identified (KZN Provincial Planning Commission, 2017):</p> <ul style="list-style-type: none"> • Game Changers – This applies to projects that will structurally change the economy and the way we interact with it; • Major enablers – This applies to projects that will unlock downstream infrastructure services; and • Major Needs – This applies to projects that are meant to address wide-scale regional needs or significant private sector projects. <p>The significance of a project being awarded “Catalytic” status is that it will confirm that such a project had been subjected to a screening and prioritisation process of the Provincial Planning Commission (PPC) and the Infrastructure Master Plan (IMP) Team. As such, Catalytic Projects will receive preferential facilitation support and guidance, in recognition of the contribution such a project can make to achieve the growth targets of the Province. These Catalytic Projects, therefore, form an integral part of the PGDP (KZN Provincial Planning Commission, 2017).</p> <p>According to the PGDP, the KZN ASP is classified as a game-changer public sector catalytic project that will have an impact on a metropolitan scale (KZN Provincial Planning Commission, 2017).</p>
National Development Plan (NDP), 2030	<p>South Africa’s first National Planning Commission was set by President Jacob Zuma and inaugurated in May 2010. The objective posed to the National Planning Commission was to take an independent view of South Africa, and from that, derive a Vision and a Plan that is focused on enabling a much better quality of life for all South Africans by 2030. The primary channels through which improvement in the quality of life are likely to come about, are through eliminating poverty and reducing inequality - the two single biggest problems in South Africa. These aspects affect every other aspect of development and every aspect of life for the citizens of this country. As both a cause and result of these primary problems, the NDP has identified nine specific and predominant challenges:</p>

Legislation	Applicability To The Project
	<ol style="list-style-type: none"> 1. Too few people work; 2. The quality of school education for black people is poor; 3. Infrastructure is poorly located, inadequate, and under-maintained; 4. Spatial divides hobble inclusive development; 5. The economy is unsustainably resource-intensive; 6. The public health system cannot meet demand or sustain quality; 7. Public services are uneven and often of poor quality; 8. Corruption levels are high; and 9. South Africa remains a divided society. <p>The manufacturing sector is considered to be a key sector for delivering the economic growth required to tackle the triple challenge of poverty, inequality and unemployment, with the automotive industry viewed as having a significant role to play, both as employer and stimulator of economic development. Cluster development is viewed as an imperative to enhance the country's global competitiveness, with a supportive macroeconomic environment of appropriate tariffs and incentive schemes in core industries necessary to enhance competitive and comparative advantages and thereby positively impact the country's trade balance.</p>
<p>Industrial Policy Action Plan (IPAP), 2017/18-2019/20</p>	<p>The Industrial Policy Action Plan (IPAP) (DTI, 2017) sets out in detail key actions and time frames for the implementation of industrial policy in South Africa. It is the apex policy document of the Department of Trade and Industry (DTI) and is drawn from a range of visions set out by successive industrial policies such as the NDP, New Growth Path (NGP), and National Industrial Policy Framework (NIPF). The IPAP sets out an industrial policy framework with overriding interventions that will prevent industrial decline and support growth, as well as diversifications of South Africa's manufacturing sectors. IPAP will ultimately lead to a restructured economy with more value-adding, labour intensive, and environmentally sustainable industrial activities.</p> <p>The IPAP sets out transversal and sectoral focus areas to guide the implementation of the policy. Of particular importance to the KZN ASP is the transversal focus of Industrial financing through incentive schemes, which is intended to support private sector investment and broad-based black economic empowerment (B-BBEE) in critical industrial sectors. A key instrument of which is the Automotive Incentive Scheme (AIS) (see the overview of the Automotive Production and Development Programme in the following section). In terms of sectoral focus, the IPAP views the automotive sector as a key industry for driving manufacturing output and narrowing the country's trade deficit.</p> <p>Clustering in the automotive industry is viewed as pivotal to promoting the competitiveness of the industry as this approach facilitates the establishment of economies of scale, allowing South African OEMs and their suppliers to compete with foreign suppliers that have much greater economies of scale in locations in Western Europe, Asia and America.</p>

Legislation	Applicability To The Project
The South African Automotive Masterplan to 2035	<p>The aim of the South African Automotive Masterplan (SAAM) is to develop a clear, strategic roadmap for the development of the South African automotive industry through to 2035 (Barnes & Black, 2017).</p> <p>The SAAM recognizes that the South African automotive industry’s vision will only be realized through the achievement of a set of key development objectives. Six have been identified as being central to the SAAM’s success (Barnes & Black, 2017):</p> <ol style="list-style-type: none"> 1. Grow South African vehicle production to 1% of global output (projected to reach 140 million units annually by 2035); 2. Increase local content in South African assembled vehicles to 60% (from a 38.74% base); 3. Double total employment in the automotive value chain (from 112,000 to 224,000); 4. Improve automotive industry competitiveness levels to that of leading international competitors (such as Turkey and Thailand); 5. Achieve transformation of the South African automotive industry through the employment of Black South Africans, upskilling of Black employees, empowerment of dealerships and authorised repair facilities, and substantially increasing the contribution of Black-owned automotive component manufacturers within the automotive supply chain; and 6. Deepen value addition within South African automotive value chains (across selected commodities/technologies).
eThekweni Municipal Spatial Development Framework (MSDF) 2018-2019	<p>The MSDF is an integral component of the Integrated Development Plan (IDP) and a key spatial transformation tool which guides how the implementation of the IDP should occur in space. The MSDF, therefore, guides the desirable spatial distribution of land uses within a Municipality in order to give effect not only to the spatial vision, goals and objectives of the Municipality but by directing where the city should intervene in space to achieve its transformational objective. This is achieved through the identification of metro-wide spatial priorities and spatially targeting interventions in these key areas. The MSDF is also aligned with provincial and municipal sector plans and strategies as a way of ensuring that the desired spatial form and outcomes of the Municipality are achieved both horizontally and vertically (eThekweni Municipality, 2018).</p> <p>The MSDF (2018, p. 164) specifically notes that the City has a number of priorities that it will pursue, most of which align with national government’s focus on infrastructure development and job creation, and that this includes “the development of a logistics park in Illovo to support the automotive sector”.</p> <p>Furthermore, the MSDF (2018, p. 332) identifies Strategic Investment Areas to help prioritise and guide development initiatives to be located in areas where the greatest impact and positive spin-offs from a city-wide scale can be achieved.</p>

Legislation	Applicability To The Project
	<p>Illovo is identified in the MSDF (2018, p. 332) as such a Strategic Investment Area and it notes that “The Port expansion plans, the Back of Port Plan, the Dedicated Freight Route and the Automotive Supply Park (ASP) are all integral elements of Strategic Infrastructure Project (SIP2) and will be crucial to the economy of eThekweni and the Province”.</p> <p>The SDF map shows the location of the ASP as proposed industrial development.</p>
Illovo South Local Area Plan, 2014	<p>The Illovo South Local Area Plan (ISLAP) was developed “to provide a strategic framework and clear phasing and implementation plan to manage development and develop a land use scheme in a manner that maximises land value {and} promotes integration and sustainability” (Black Balance Projects, 2014). The area covered by the ISLAP largely correlates with the borders of the study area.</p> <p>The ISLAP identifies the study area as a vital catalytic area with the potential to contribute towards industrial/ manufacturing and retail opportunities combined with higher density housing. The TEA is referred to as District 4 in the ISLAP and is earmarked as an industrial/ manufacturing zone, with a specific mention of the ASP and supporting service industries, which are proposed for District 5. The development and land use proposals for District 4 are based on the assumed requirements of the KZN ASP. There are significant environmental constraints limiting the availability of land for development in both of these Districts, with less than half the land in these Districts considered suitable for development (165.83ha).</p>
Municipal Bylaws	<p>The eThekweni Municipality may have certain requirements in terms of bylaws and trade permits, and a few of these may be applicable to this project, namely the following:</p> <ul style="list-style-type: none"> • Water and Sanitation Bylaw • Waste Management Bylaw • Municipal Health Bylaw <p>The proposed project needs to consider the above during the implementation of the project.</p>